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ORIGINAL LECTURES.

CLINICAL LECTURE

ON MODERN METHODS OF TREATING PULMONARY PHTHISIS, AND WHAT WE SHOULD EXPECT FROM THEM.

Being an Abstract of a Lecture delivered at the Bellevue Hospital Medical College, October 28, 1884,

BY BEVERLEY ROBINSON, M.D.

GENTLEMEN,—You will remember that at my last lecture I told you that in many forms of stomachal disease, but particularly in atonic dyspepsia accompanied by marked fermentative changes in the ingesta, I had found, when other methods failed, the use of lavage by means of the soft-rubber tube a most valuable operation; indeed, I said, when the *hot-water* treatment was insufficient, it was the only plan to follow. I spoke to you of several cases in my experience which strengthened my statement, and I referred you to others with which I was familiar. I am glad to bring before you to-day a young man who is at present in my service at St. Luke's Hospital, and whose experience is amply sufficient to show the marked beneficial effects obtainable from daily washings. This young man states, as you have just heard, that he was formerly a very robust lad. After an acute affection, from which he suffered some months ago, he was attacked with severe acute dyspepsia. In fact, this symptom became so aggravated that he could digest no kind of food. Even peptonized milk would lie as a weight in his stomach, and frequently was rejected some time after being swallowed. Under these conditions daily washing-out of the stomach with warm water and borax (3ss-Oij) was begun. Very soon he improved notably. His appetite was better, his strength increased, and in a week or two he was able to digest with ease certain light articles of diet. At this date he is no longer under active treatment with the cesophageal tube, and can digest roast or broiled meats, soups, milk, and bread, but cannot as yet digest vegetables. The number of successive lavages required to produce this result was seventy-seven.

This patient has acquired great facility in the introduction of the stomach-tube, and will now show you how readily he accomplishes this little feat. Please notice, as he pushes the soft-rubber tube backward and downward slowly, or again quite rapidly, he makes continual efforts at deglutition, and also breathes at a normal frequency. Now that the tube is in the stomach, you see that he is not apparently uncomfortable; it does not excite vomiting, or even nausea, and he can reply to any question, if addressed to him, without special effort. In order to show you how such a patient may be fed, I shall pour down the funnel and connecting rubber tubing a certain amount of this milk-and-egg, which was brought here at my request by one of the other patients, who is suffering from localized pain and dysphagia, due to advanced laryngeal phthisis. You see, our man takes his milk-and-egg very quietly, and I could go on perfectly well and pour into his stomach the entire contents of this pitcher, and probably do so with satisfaction to him. As it is, the demonstration is entirely satisfactory, and I now proceed to the subject of my lecture of to-day, which shall be mainly in regard to what I shall designate as "Modern Methods of Treating Pulmonary Phthisis, and what we should expect from them."

First, however, allow me to direct your attention for a few moments to the poor fellow who sits here. This man came to see me the other day, complaining chiefly of dysphagia and pain in his throat. The difficulty of deglutition does not exist to any very marked degree for liquids, but for solids it is extreme. Indeed, for more than six months he has swallowed little or no solid food, so that at present his appearance is that of excessive emaciation and weakness. His dysphagia is due, first, to the fact that the alimentary bolus in passing the larynx appears to go the wrong way, and the effort to swallow is followed immediately by a severe paroxysm of cough, and by rejection of food by mouth and nose. Occasionally, when food has evidently entered the larynx, he has nearly suffocated before he could free his respiratory tract from obstruction. But this is not all. The mere passage of solid food causes intense local pain, which he very much dreads, and from which he recovers slowly, and after a severe shock

to his system. Upon examination of this patient's throat, I find that he has advanced ulcerative phthisical laryngitis. The epiglottis is half eaten away, and, but for the fact that he denies syphilitic disease, shows no signs of its existence, and has evident pulmonary phthisis at its second stage in the region of the left apex, I should almost be persuaded that he had tertiary syphilis of the larynx. Further, I would add that my patient says the pain in his larynx at night is so intense that it prevents him from sleeping. Can we help him, and in what way? As a matter of fact, I find, gentlemen, he is greatly relieved from local pain by means of insufflations of a powder into his larynx of one part of tannin and two parts of iodoform; but I doubt very much whether these insufflations will do more than alleviate his sufferings for a time, unless we assist him to eat more nutritious food and in larger quantities. Here, if ever, there is a case for super-alimentation, and with the aid of the soft-rubber œsophageal tube (gavage). He should begin with a pint of milk, three raw eggs, and Reed & Carnrick's beef peptonoids, in ounce doses, poured into his stomach twice or three times a day. So soon as his stomach will bear more at any one feeding, it should be given more. When I recommend beef peptonoids I do not recommend what is best, for the powdered meat of Favrot,* according to Millard, is, doubtless, superior. This preparation, therefore, if procurable, should first be asked for, and if it cannot be obtained, then the beef peptonoids may be substituted as the next best and most suitable form of meat and gluten that we can use. Of course, the employment of super-alimentation does not interdict the use of the powder locally, nor does it absolve us from the duty, so soon as we can, of employing all other means, medicinal and hygienic, to cure our patient if possible. But bear in mind one very important fact, gentlemen, and over and beyond all theories in regard to the parasitic cause of tubercular disease of the lungs or larynx, that in most of these cases we have abundant proof of malnutrition and wasting. Do whatever else you choose and can, but first give your patients sufficient food to more than

neutralize all waste or inanition. Some of these patients eat fairly well, have a tolerable appetite, but do not take *enough*. Give them more abundantly. Sometimes they can be persuaded to take large quantities of food for a while,—more than their appetite demands,—but soon food taken in this way disgusts even the best disposed and most yielding patient, and he finally declines to submit further. Then is the time to advocate strongly the use of the œsophageal tube for purposes of alimentation. Explain to him that lack of appetite, or repugnance to food when swallowed voluntarily, is no proof that large quantities, if introduced mechanically, cannot be thoroughly digested and assimilated. Numerous facts prove the contrary. You have only to read the remarkable histories first recorded by Debove and Dujardin-Beaumetz, and since verified, corroborated, and amplified by Dr. Millard, of this city, to be assured that super-alimentation is possible in patients who have at first the most pronounced aversion for food.

Further, what results can we obtain if we persist in thus feeding phthisical patients? The most remarkable and satisfactory. Many cases, of undoubted authenticity, have been published already, in which advanced cases of pulmonary phthisis have been permanently cured, thanks to super-alimentation, in this manner, continued without interruption during a series of months. Physical evidences even of softening at the apices have disappeared entirely, and all rational symptoms, such as hectic, night-sweats, elevated temperature, cough, dyspnoea, profuse expectoration, repeated hæmoptyses, have been completely suppressed for a period of time sufficient to guarantee complete recovery.

In addition to super-alimentation, I would urge the utility of continuous inhalation of dry vapors of certain volatile substances, such as creasote, carbolic acid, turpentine, iodine, eucalyptus, and benzoin. Since Curschmann, Roberts, Yeo, Pepper, and others have spoken favorably of these inhalations, I have made quite extensive use of them in both hospital and private practice. Judging by my own experience, I cannot believe that these inhalations are able by themselves to effect very considerable reparative changes in larynges or lungs already far advanced in

* This preparation has been imported by E. Fougere & Co., New York City.

phthisical lesions. I am quite confident, however, that they often lessen very much the frequency and intensity of cough, deodorize and diminish somewhat the quantity of sputa, and give considerable relief at times to painful sensations, both in the throat and chest, of such patients. I have shown you at a previous lecture the forms of inhalers I employ. The first kind is made of two perforated metal plates held together by a spring-catch, and between the plates a layer of oakum or absorbent cotton is placed, upon which a sufficient quantity of the volatile liquid is poured. They are held in place over the mouth by means of two elastic loops, which are passed around the ears. This form of inhaler is sold in this city by Mr. Ford, and was first introduced to the profession, I believe, by Dr. F. P. Kinnicutt. The other form, which I consider preferable, although much cheaper, was imported by me for use in the out-patient department of the New York Hospital. It is composed of a single piece of perforated light metal somewhat pyramidal in shape, and having attached at the apex of the pyramid a small piece of sponge, which, after moistening with water, should contain the volatile liquid. These inhalers can be worn during several hours each day without occasioning much annoyance, and with very decided relief to many distressing symptoms. They are unquestionably far superior to all other kinds of inhalers hitherto brought into use. They never give fresh attacks of cold, as I have frequently found with the warm-vapor inhalations was the case. They are very portable, readily put on and taken off, and their cost is moderate. The undiluted dry vapors, when inspired, probably reach as far down the respiratory tract as any atomized fluid from the numerous spray producers in the market, and appear to me in every way preferable to them.

This other patient whom you see is affected with pulmonary phthisis, which has reached the stage of softening at the left apex. He has no laryngeal complication, and yet he has most distressing and obstinate cough. To combat this symptom all ordinary means have been exhausted, and without giving even temporary relief. One week ago I injected ten minims of dilute Lugol's solution into the second left intercostal space, in a vertical line with the left nipple, and to the

depth of one and one-half inches. The effect of this injection was to lessen his cough very much, and to make, as he states, his breathing somewhat easier. To-day I shall repeat this injection over the same region, and you will note the immediate result. It causes, as you perceive, but little pain, and, although the man coughs a few times immediately after the injection, and expectorates some thick, yellow phlegm, the sputa are not even tinged with blood. This is not always true, for in a few instances, after making similar injections, there has been slight hæmoptysis. I have thus far made about seventeen or eighteen of these intra-pulmonary injections, and with satisfactory results, so far as the cough and dyspnoea are concerned. The patients, in two or three instances, have affirmed that the quantity of sputa had also lessened. As yet, I have not followed up any one case long enough to know what definite results I shall obtain with respect to the pulmonary lesion itself.

In this country we owe this method to the personal initiative of the distinguished professor of practice at the University of Pennsylvania, Dr. William Pepper. In all, Dr. Pepper has performed more than two hundred intra-pulmonary injections, and has never had, so far as I know, one disastrous result. In fact, only on one occasion did he have a hemorrhage following the injection which appeared grave at the time. Even this hemorrhage seemed to be due to the suction caused by a considerable vacuum in the pump of Dieulafoy's aspirator. Dr. Pepper has given the first intercostal spaces as the proper places on the anterior chest-wall to make these injections. From my own investigations in the dead-house, I incline to the belief that the upper portion of the inner axillary region will be ultimately found to be the most direct way of reaching the cavities situated at the apices. To be frank, however, I should state that on two occasions, when I made injections at this spot, I had some bloody sputa follow the little operation.

What may we hope from intra-pulmonary injections? In my belief, they will disinfect the contents of lung-cavities; they will modify and diminish the secretions from the walls of these cavities; they will tend to effect cicatrization and contraction of these spaces, usually filled

with a material which is a constant source of peril to the patient. I have not been convinced of the advantage to the patient, when bearer of a phthisical cavity, of a free opening through the chest-wall and complete drainage of it. But this is a very different matter from the operation you have just seen, which may be repeated again and again without risk or shock to the patient, and which promises well to the sufferer, if he has the faith to hold out until the good results are noted.

I have endeavored in this lecture, gentlemen, to give you a slight *aperçu* of what I consider real advances in the treatment of pulmonary phthisis. We all know what treatment by the old methods means for the vast number of unfortunate beings who crowd our city dispensaries. With the three methods advocated by me before you this day,—viz., super-alimentation, continuous dry inhalation, intra-pulmonary injections,—many patients will yet be saved who, with cod-liver oil and the hypophosphites alone, or added to the other resources usually employed, would most certainly die. Nothing prevents us from using all previous means to help our phthisical sufferers, but I would also make a very urgent plea for the plan you have seen me practise before you.

ORIGINAL COMMUNICATIONS.

THE TRADE-ASPECT OF MEDICINE.

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Read before the Academy of Medicine, and Recommended for Publication.

"**T**HAT was a fearful experience you had in that typhoon in the Japan Sea," once remarked a very dear and very eminent friend, whose memory I revere, "but I almost wish you had been drowned;" and when I inquired why he would I had had such a doleful ending, with a merry twinkle of his eye, he added, "Because you would not have written that paper proclaiming the deplorable degree of ignorance in the medical profession." "Is it not all true?" I queried; and he answered, "Ay! that's the mischief of it; it is all too true. The fact is, the shiftless city pill-garlick, or the country

leech whom you see sitting in front of his rude shanty like the monthly nurse and village blacksmith, only plies his trade." And these words he spoke seriously, sadly, despondingly.

Let us look facts squarely in the face. Are there in our ranks, ninety thousand strong, mechanic surgeons, men midwives, and tradesmen doctors? and, if so, have they a right to the honors and consideration that pertain to the other members of the profession of medicine? If not,—and assuredly they have not,—how can the fact be made patent that they are only camp-followers, and not of the rank and file of a noble army of men enlisted, organized, and drilled to serve a great and glorious cause?

One does not have to go into country towns or sparsely-settled wilds to find the medical tradesman's sign. A very short time ago a leading medical journal, itself a foremost advocate of all that is elevating and ennobling in medicine, published a communication from an M.D., who was not even ashamed to append his name to the degree, bemoaning that certain medical officers of the army had treated sick people in his neighborhood, and therefore, inferentially, deprived him of a possible fee. That the element of special locality and personality may be eliminated, I right-off plead guilty, as a medical officer of the navy, to the same offence, and further admit I know of many others, in both services, who have done and propose again to do likewise, whenever they can relieve suffering, restore health, or, in any other way within their power, benefit a human creature or an afflicted brute. The wail of this complaint might therefore be allowed to pass unheeded, but that it serves to illustrate the tradesman's spirit which has been engrafted upon a noble stock, which it threatens to overrule and cause to bear only its own unsavory fruit. He writes as he feels, and he feels as the corner grocer whose gall is stirred because some other vender, who has offered better or more tempting wares, has cut down his own sales. The advertising insignia and artifices, the gold-headed badge of office, the borrowed clerical necktie, the pompous air, the insinuated advice, the covert innuendo, have, perchance, failed to lure patrons to the shop where calomel and quinine are retailed instead of soap and molasses. He denounces "the unfair

competition" (and competition is the soul of trade), "because," he alleges, "the army surgeon is backed by an assured salary. The office he occupies and the horse and buggy he uses are in part paid for by the very physicians against whom he comes in competition. To the military medical mind this may seem fair and honorable; to the civilian, however, it certainly does not;"* and from the tradesman's point of view it is mean, I admit, to borrow the sounding-gong of your rival's milk-wagon and make him help pay besides for hawking your wares.

It does not mend the matter if this army-interloper makes no charge for his services; that aggravates the offence, for the medical tradesman profoundly detests charity and charities. The public dispensaries, hospitals, and lying-in asylums, the college clinics and their out-door poor-service, are regarded by him with the same disfavor that the old-time operative entertained for the thing that was moved by steam and did the work of a hundred clumsy, horny hands. Not that the new net catches more fish than he could even hope with his hook and line, but that it scoops in some gudgeon which might perchance have bitten his bait. Little reck he that the half-starved widow pays with her blood for his questionable advice and more than useless dose. The mantle of charity that would shield her and her puny children might envelop some parsimonious invalid who could afford to pay.

But charity is not the weightiest obstacle to success in medical trade. That may thin the crop, but as nothing in comparison with the blight called sanitary reform, which even medical men are fomenting. The tradesman's soul is sore as he sees the thistles on which he has fed uprooted from the fields where he has browsed. You will not find him at hygienic congresses, nor sitting on State boards of health, cheek by jowl with homœopaths and eclectics and other hated heretics and schismatics; nor leading sanitary associations, sanitary councils, or sanitary conferences; for, to his mind, it is downright folly to choke up the source whence lucre flows, though, to him, never but in a shallow stream. Sections in State medicine do not delude him with the borrowed plumage of their names, for what "medicine" is

there in them or in that synonymous incongruity, *preventive medicine*, that should interest a man who wants to know the last gynæcological wonder, the latest way to cure bleeding piles or dumb ague, or the most recent novelties in elixirs and pessaries? Who would prevent venereal diseases, who knows the golden prospect from a protracted gonorrhœa, an obstinate stricture, a chain of suppurating buboes, or a crop of mucous patches? He can never have heard the crackle of a crisp greenback, who would advocate certified hospitals for the gratuitous treatment of these unfortunates,—vile, debauched, and prostitute though they be; for the most sanctimonious prater that the ways in which Divine Providence chastises sin should not be interfered with by man does not refuse to pocket the sinner's fee who objects to the chastisement.

A very little leaven affects the mass. Imbued with the tradesman's spirit, medical societies—some only, not all—have insensibly become little else than trades-unions, and, assembling ostensibly for professional improvement and the greater glory of the science of medicine, they make their shibboleth the criterion of professional fellowship. I foresee that this may be echoed back as a charge against this Academy; but the medical trades-union is not a lodge of masters of the craft, but a mere coterie of men who have learned by rote a creed they need not even understand so long as they swear by it. This, with a hieroglyphic M.D. on parchment, as unintelligible to the owner as his Latinized name done in German text is irreco gnizable by him, entitles him to enter the most holy place, where all sit on the same level worshipping the same unknown God.

It is the huckster's trick to hide under the cloak of his reputable neighbor, that the latter may share the blow intended for the other. Anticipating, therefore, the charge that I am inveighing against medical societies indiscriminately, I desire to emphasize that I refer only to those bodies whose members are banded together after the fashion of mechanics' unions, by fee-bills prescribing how much shall be charged for administering a dose of castor-oil, dressing a sore, and extracting a baby, or rather watching a baby extract itself, and by formulized rules of behavior, rather than by that innate sense of honor and that rectitude of purpose, the outcome of

* The Medical Record, vol. xxvi. No. 3, p. 83.

culture, refinement, and education, which ought to characterize every reputable man who claims to be *doctus in medicinâ*.

Unfortunately, the degradation of our great science has not been retarded by its development. While in every country, and here as prominently as anywhere in the world, investigators are reaching one headland after another in unknown seas, and clearing away the undergrowth of ignorance that covers new lands for cultivation, the sciolist and charlatan still jabber their scanty jargon and display their rule-of-thumb methods. Is the profession bound to accept this rabble as part of it, or shall it repudiate them as unworthy its honor and dignities?

It is a fact that attempts at exclusion of this rag-tag and bob-tail—by requiring tickets of admission, certificates of qualification, testimonials of merit, to be presented at the gate of the temple—have failed of their purpose. Tickets are begged, borrowed, or stolen; certificates are forged; testimonials are wheedled from some benevolent master who cannot say "No." It is well enough to proclaim that a proper degree of medical intelligence shall be a requisite, and to insist upon preliminary academic training and systematic instruction in medical philosophy before mere medical handiwork. A few schools have undertaken this, but there are ninety-and-nine others which still grind out their smatterers to recruit the tribe of empiric tradesmen. State Boards of Medical Examiners, not trammelled by school affiliations and predilections, attempt, in some States, to arrest the overflow from unscrupulous collegemills; but their sieves are coarse, and only the rougher cobbles are arrested, and the stream that flows by is still a muddy one. A third barrier has been sought in medical societies, but, although some of these have boards of censors, who rigorously scrutinize every candidate's qualifications, others, as I have intimated, have taken their hue from the majority, and themselves become not much better than trades-unions. Shall, then, fellowship in this Academy be the *sine qua non* of professional reputableness? While I believe there are none here who have not won their spurs, there are too many *preux chevaliers* in the ranks for us ever to hope to have them wear our colors. I do not pretend that the mere possession of one

degree more than another is a guarantee of competence, though the academic grades in Belles-Lettres and the liberal arts do mean something more than the empty pretentiousness of the more sonorous doctorate; neither will the additional brand of Oxon., Cantab., Harv., Y.C., U.P., A.M.C., or C.P.S.N.Y. serve any better to distinguish the sheep from the goats; for cultured men, graceful writers, profound thinkers, acute observers, and learned scholars are found in our profession, whom no degree can dignify, and whom no caudal alphabetics are needed to identify.

After all, the remedy is with the profession itself, and back we come to the point on the circle at which we started. Who constitute the profession? Is medicine a tri-unity of science, art, and trade? Are the scientific physician, the expert mechanic, and the plodding tradesman *fratres nobiles*, or are they distinct and demarcated by well-defined lines,—not metamorphosing one into the other like larva, pupa, and imago, but separable vocations? I begin to believe this inevitable. I have elsewhere ventured to suggest that the medical neophyte shall receive the degree of M.B. on leaving college, the statelier degree of M.D. being reserved for those who have proved themselves worthy of it. But if all colleges will not exact a literary preparative; if they will not graduate only bachelors, and reserve the doctorate for those of riper years, wider experience, and profounder research; if licenses to practise cannot be limited to the properly-qualified; if medical societies will not rigorously exclude every illiterate, ignorant, and incompetent applicant; if a sentimental objection exists in this free country to the doctrine that one man is not as good as another in medicine as in anything else, no matter whether he knows anything about it or not;—then the only thing left is for those who are content to stand on the tradesman's level to stand there for aye. But let those who look upon medicine as something else than a traffic in human misery, a means of self-aggrandizement at the expense of human suffering, have the courage of their convictions, and stand apart.

Is it arrogant and vainglorious assumption for you and me to refuse to recognize as a professional compeer a man who, having accepted the position of apothecary

in a public institution, protested he could not find any muriatic acid in the dispensary, with the bottle labelled "*Acidum Hydrochloricum*" staring him in the face, and showed his familiarity with the metric system by equivalencing grammes with grains; or that other who, not two months ago, signed a letter stating that he and a consulting friend, who had been called to a case of unmistakable suicidal narcosis, had not thought it their province to attempt any treatment in the absence of his official superior, and for six hours sat by and saw him sleep into death,—an instance parallel with one that occurred to me, some years ago, in consultation over an opium suicide, when the attending physician had been some hours trying to persuade the recalcitrant patient to take something, until the latter became too drowsy to argue longer? Must we take them by the hand and sit in solemn, owlish conclave with such men because they can flourish their regular M.D.? Then what should we do with that other who prescribed for a lady in Philadelphia—

R Sulph. quiniæ, gr. xx;

Strychniæ, gr. i;

Acidi sulphuric. F., 2½ oz.;

S. Coch. parv. (a teaspoonful) 4 times daily; and was only saved from killing her and adding torture to the act of dissolution by the greater wisdom of the apothecary to whom it was sent to be compounded?

Who of you, whose wife and child go to a strange place, does not feel a greater dread of the unknown doctor than of the unforeseen disease they may encounter? There was comparative safety so long as the village medical bumpkin treated dyspepsy, wind-colic, and yaller janders with calomel and jalap or black draught; you had the satisfaction of knowing that the thing did not stay in you; but now that the great manufacturing drug firms are sending their pretty pink-and-white confectionery into every doctor-shop, however humble, you do not know what mighty and mysterious alkaloid may find its way into your penetralia to stay.

And this brings me to a very good starting-point in our proposed reform, by suggesting that there are beams in our own eyes that may profitably be removed. It may involve considerable sacrifice of personal consequence and some self-abasement to admit frankly that we do not know everything, that we cannot cure every

disease, that there are problems in therapeutics we cannot solve off-hand, and in many instances we do not really know what the matter is, and that, despite the elegant polypharmacy of the day, we do not know what thing it is right to give. This will distinguish at once the physician of culture from the men who know everything and can cure anything, from cancer to the itch.

If, however, medical men are to be honest and say, "There is nothing the matter with you; you do not need any medicine," or, "I do not know what is the matter, and I will give you nothing until I do;" if benevolence and charity are to make them refuse the fee the poor woman and child cannot afford to pay, and they are to say, "Keep it to buy bread; you want no drugs;" if the exuberant growth of the *Pharmacopœia* is to be pruned down, and a warm bath and rest in a clean bed and quiet room, or exercise in the fresh air and sunshine and substantial food, are to be the routine prescriptions, and a few potent drugs are to be used, like surgeons' knives, only when we know where and with what to cut;—if all this be done, how can men who have made medicine their vocation expect to live?

In the first place, a higher standard, educational and professional, would greatly reduce the number of applicants for this calling, and the graduate would, in the second place, not, as now, have to hang out his sign and wait for the patients chance might throw in his path, but begin his career in some of the hospitals, dispensaries, and eleemosynary institutions, which should be multiplied until every sufferer too poor to pay can receive gratuitous attendance. But while the patients at such establishments ought not to pay, the medical officers attached to them ought to be well paid; and this is where and how I would have every young physician begin his professional life,—in the receipt of an "assured salary," an income sufficient to enable him to live honestly and reputably, which is all the army medical officer can boast whose officious intermeddling in the cause of suffering humanity has so excited the ire of his neighbor tradesman.

In recent years the practitioner who, from special aptitude or preference, who, having a soft, pliant hand and sensitive touch, or an ear recognizing shades of

tone in the rushing currents of blood and air, has limited his work to special classes of disease, has been looked at askance by many in the profession, as treading exceedingly close to the border-pale of recognition, and the little private hospital or dispensary he establishes, where the poor come for relief and his pupils cluster to learn, is denounced as an encroachment upon the field of general practice on which the young physician is to find subsistence. But why should not the wretched poor have the benefit of the highest medical skill and knowledge as well as the wealthy parvenu, who hires his doctor, however renowned, in the same spirit as he hires a coachman? What man owning a complex, intricate machine would intrust its repair to a novice in mechanics? Which of you will take his Jorgensen to the watchmaker who repairs his kitchen-clock? Why, then, place this human body—the most complex, intricate, and least understood of any mechanism ever devised—at the hap-hazard of some tyro in medicine? Which one of us does not shudder when he looks far back into his youth and recalls how blindly and recklessly he assumed the solemn responsibilities of this greatest and grandest of men's callings?

Let us, then, multiply and encourage the special wards and dispensaries until there shall be clinics for eyes, ears, throats, lungs, and hearts; for skin, nerves, limbs, and abdomen; for venereal diseases and cancerous diseases; for consumptives, for paralytics, for the poor and the maimed, and the halt and the blind; and if there is not public spirit in the State to support these charities, then appeal to the churches in concert to assure the task, and undertake the great mission-work of making the blind see, the lame walk, and the dying revive. In this work medicine and religion can labor on common ground. There is no other avenue to the soul than through the body, and they who would care for the former must see that its earthly tenement is undefiled. Church sanitary work of the broad, unsectarian character I suggest would have this other result,—of making known the needy as well as the afflicted, the poor to whom food and drink will be wonder-working medicine. The light of medical knowledge makes many a hidden sorrow visible, and the doctor whose soul is not eclipsed by the round disk of a silver dollar looks

upon the wan faces and flaccid limbs of the ill-fed and under-fed women and children he everywhere encounters as sadly as if they were seared by cancer or racked by phthisis.

The multiplication of endowed hospitals, asylums, infirmaries, dispensaries, and clinics for treatment of the poor, whose necessities are properly certified by sanitary officials, magistrates, or church authorities, and of private hospitals and sanitariums for the rich, who can afford to pay, would give employment to a very large number of medical men, the older as guides and instructors, the younger as students and workers,—all equitably remunerated. Not only would they serve the people who now fly to every nostrum and panacea, but return a medical harvest, in the shape of exact statistics of disease,—now meagre and unsatisfactory. Every charitable institution would be a school of experimental medicine, in its justifiable sense, under the supervision of the highest medical authorities.

But there is a wider, equally useful, and just as necessary field for medical skill and intelligence in the still-to-be-established municipal sanitary service. Communities some day are bound to discover that prevention is cheaper than cure, and sanitary inspectors are bound to be in demand.

The Medical Record of August 9 very properly contests the assumption of *The Sanitary News*, "that the most efficient and reasonable sanitary work is accomplished by men outside the medical profession," and pertinently asks, "Will not our excellent contemporary *The News* now publish some letter from A Plumber to a Young Doctor, for example, telling him how to avoid typhoid fever, cholera, smallpox, etc.?" The popular idea of the physician as a cormorant of fees is speakingly illustrated when a journal of the high literary and scientific character of *The Sanitary News* editorially says, "The really useful and valuable sanitary work which conserves the public health is done by these same 'perpetrating' architects and by plumbers, when they design and execute those measures which *cheat the physician out of his bill* by preventing the causation of disease." Happily, the profession vindicates itself. The ablest, most zealous, most enlightened advocates of sanitary reform are themselves able, zealous, and enlightened physicians. The

time is not distant when sanitary inspectors will be demanded in every city, town, and hamlet. They should be found at every railway-station, and at every mercantile entrepôt, and every factory and market-place, at every school and church and theatre, and overseeing every dairy, bakery, butcher's stall, and grocer's shop; and ninety thousand physicians can have no better or more appropriate and honorable employment than enlisted in such service. There is not a city in this country in which to-day the fines for violations of even existing health-regulations would not more than suffice to defray the expenses of a well-remunerated sanitary establishment, and an efficient sanitary service cannot be a cheap one, nor ought the attempt to be made to conduct it on a parsimonious plan. Competent inspectors can only be secured and interested in their work by receiving adequately compensative salaries. In my opinion, too, the dignity of the office of the family physician would be enhanced if he likewise were salaried and paid as the sanitary adviser and counsel of each household, his income being determined by the size of his clientage, and not by the fortuitous occurrence of a case of typhoid, or an epidemic of measles, welcomed for their greater money value.

The poor provided for; the young practitioners serving at hospitals, dispensaries, and clinics; the mass of the profession doing honorable, legitimate yeoman service in caring for the health of the community, there will be left ample employment for the elders,—the experienced physician, the skilful surgeon and accoucheur, the dexterous special operator, —to whom naturally will fall those greater rewards to which greater ability and larger practical acquaintance justly entitle them.

There is truth enough in medicine for us to eliminate humbug and leave it to the quack, who will thrive as long as credulity is an element of human nature. We need no alchemic parade of many-thousand-paged dispensaries; a modest volume will hold our therapeutics. Let our quartos be for the facts of anatomy and biology. The natural history of man is not all unfolded; the natural history of disease in its myriad protean forms to be yet written will fill more tomes than one can write or generations read. There are laurel wreaths for the investigators,—who will make dis-

ease impossible,—which they can wear without blushing, as he must who hears himself lauded for marvellous cures to which he knows he has no title. Let the trader in cure-alls sound his wares in the illegitimate fashion of the undisguised quack or by the legitimate method of the regular charlatan. The nurse, the midwife, the prescribing apothecary, the cow-leech, and the corn-doctor, are petty tradesmen of the same calibre with them. Let us repudiate the assumption that a shrewd knowledge of the sick-room is all that is required to make a doctor in medicine, and insist upon our claim that there is no intelligence too bright, no application too profound, no industry too severe, to be devoted to the study of medicine, in which, as Professor Young said at Philadelphia of the study of the heavens, "the human intellect finds most invigorating exercise and most nourishing and growth-making aliment." To those who would give it narrower scope let us be able to respond, "Not of that ilk."

In the republic of letters every scrivener is not a senator, but the *aristoi* wear their laurels neither by birthright nor by letters-patent. Why should any dolt and ignoramus be veneered by a piece of cabalistic sheepskin into a doctor in medicine? If it be undemocratic in this country, where theoretically all men are born free and equal, to recognize impassable classes of practitioners, as in England; or if a baccalaureate probation cannot be exacted of every graduate before he has a right to wear the doctor's toga; if societies will not refuse fellowship to the illiterate possessor of a diploma, who has neither the ability nor ambition to rise in his vocation above the tradesman's level, let us at least proclaim our belief that there is a higher medicine than leech-craft, and uphold its honor and dignity by not countenancing, by act or word, those who have had part in its degradation.

PRESENCE OF BACILLI LEPRÆ IN ANÆSTHETIC LEPROSY.—Dr. Arning, at present in Honolulu (*Virchow's Archiv*, vol. xcvi., 1884), excised portions of the ulnar nerve in two cases of pure anæsthetic leprosy, and found bacilli lepræ in the connective tissue between the nerve-fibres. This is the first time that the presence of bacilli in the pure anæsthetic form has been demonstrated.—*London Medical Record*.

REPORT ON MEDICAL CHEMISTRY.

BY WM. H. GREENE, M.D.

CHEMISTRY OF THE URINE.

THE FERMENTATION METHOD for the estimation of glucose in urine has been made the subject of a careful study by Worm Müller, in conjunction with J. Hagen, who recommend a titration with Knapp's solution before and after the addition of yeast. The difference in the results is capable of indicating a proportion of glucose as small as 0.05 per cent. The reduction which takes place after fermentation is due to reducing agents other than glucose, and cannot be neglected in urine containing only 0.04 to 0.05 per cent. of glucose. Besides this, a small quantity of the glucose, equivalent to 0.01 to 0.02 per cent. of the total proportion present, is destroyed by the yeast.

ROBERTS'S METHOD for the estimation of glucose, by the difference in density before and after fermentation, answers well for urine rich in glucose, but is untrustworthy when the proportion is below 0.5 per cent. In normal urine to which a known quantity of glucose has been added the results obtained are always too high when the difference in specific gravity is multiplied by Roberts's factor (.001 difference = 0.23 per cent. glucose) or Manassein's factor (.001 difference = 0.219 per cent.). Fermented diabetic urine has a lower specific gravity than would result from the fermentation of the glucose. On the contrary, urine containing but little glucose often gives too low results by Roberts's method.

A MODIFICATION OF THE METHOD FOR THE DETECTION OF GLUCOSE BY FEHLING'S SOLUTION has been proposed by George Buchner. In many specimens of urine containing glucose, heating with Fehling's solution produces only an opalescent yellowish-red coloration, and no red precipitate of cuprous oxide is formed. This result is exceedingly unsatisfactory, as the presence of glucose then appears doubtful. In such cases the urine should be treated with an excess of cupric sulphate solution (one to ten), and heated to boiling. A grayish-green precipitate then separates, and is separated by filtration after the liquid has cooled. On now adding a solution of potassium hydrate or some Fehling's liquid to the filtrate, an azure

blue color is produced, and red cuprous oxide separates on boiling, even when the urine contains only a minimum proportion of glucose. In all cases in which the ordinary application of the test, as well as successive additions of cupric sulphate in alkaline solution, gave ambiguous results, G. Buchner obtained by his method the most decisive glucose reaction. The previous separation of creatinin by zinc chloride is troublesome and wastes time; the first addition of the copper sulphate solution causes the separation of uric and phosphoric acids, and removes the creatinin by which the reduction of the cupric oxide by glucose is impeded.

POTASSIUM CRESOLSULPHATE has been obtained by L. Brieger from fresh urine. This substance was precipitated first with neutral and then with basic lead acetate, and filtered; the filtrate was freed from lead by hydrogen sulphide, evaporated on a water-bath, and placed in a vacuum. The crystals which separated after a time were recrystallized from hot absolute alcohol, and identified as the before-named salt.

A NEW REAGENT for the examination of urine has been proposed by P. Ehrlich. It is a very dilute solution of *paradiazobenzolsulphonic acid*, which may be first prepared in the crystallized state and dissolved in water, or can be produced in the test-liquid by adding a few fragments of sodium nitrite to an aqueous solution of sulphanilic acid acidulated with from six to ten per cent. of pure nitric acid.

When normal urine is treated with this reagent there is only a faint change of color, and it is altered to orange by the addition of ammonia or potassium hydrate. In certain diseases, on the contrary, the reagent causes the urine to assume a carmine or purple-red color, the shade of which can be readily appreciated by an examination of the froth formed after the liquid has been shaken. This reaction has been observed in pulmonary phthisis, and constantly in typhoid and scarlet fevers. It is rarely produced by the urine of patients suffering from pneumonia or diphtheria.

The coloration is probably caused by pyrocatechin and other phenolic compounds which may be present in the urine, but F. Penzold has recently shown that the *paradiazobenzolsulphonic acid* reagent may be colored red by many other bodies in presence of alkalis. Among these are acetone, lactose, saccharose, and glucose.

PTOMAINES OR ANALOGOUS COMPOUNDS have been obtained from urine, as well as from other products of the organism, fresh and putrefied, by A. G. Pouchet. By precipitation with tannin and dialysis, these products were classified as non-dialysable liquids and readily dialysable crystals. The liquid product so obtained from urine has a composition responding to the formula $C^8H^8NO^2$; it is very alterable, and is resinified by hydrochloric acid. The crystallizable portion seems to have the composition $C^8H^{12}N^4O^2$ or $C^8H^{14}N^4O^2$, and yields a definite chloroplatinate. These products are related to the oxybetaines, and are quite poisonous.

UROCHLORALIC ACID is the name given by Von Mering and Musculus to a levogyrate acid which was extracted by them, in 1875, from the urine voided after the ingestion of chloral. Richard Kulz recommends the following method for the preparation and identification of this compound. The urine is agitated with a mixture of ether, alcohol, and sulphuric acid, and the residue left on the evaporation of the extract so obtained is precipitated first with neutral and afterwards with basic lead acetate. The last precipitate is decomposed by hydrogen sulphide, and, after the lead sulphide and excess of hydrogen sulphide have been removed, is neutralized with barium hydrate, evaporated to crystallization; the barium salt is decomposed with dilute sulphuric acid, and the filtered liquid is evaporated to a syrup at a low temperature, and then dried in a desiccator; the dry mass is exhausted with hot ether, and the urochloralic acid crystallizes from the ether extract.

THE OCCURRENCE OF LARGE QUANTITIES OF INDOXYLSULPHURIC ACID AND SKATOXYLSULPHURIC ACID IN THE URINE in diabetes mellitus has been observed by J. G. Otto. In one case, in which, by Jaffe's method, considerable quantities of indigo, amounting to 0.1617 gramme per day, could be prepared from the urine, Hoppe-Seyler's modification of Baumann and Bruger's method, to ten litres of urine, enabled the separation of potassium indoxylsulphate in substance. In another case concentrated nitric acid colored the urine red, and the addition of ferric chloride produced an intense violet-red or purple color. From eleven litres of this urine 0.8 gramme of pure potassium skatoxylsulphate were obtained. The alcoholic

extract of the evaporated urine was concentrated and allowed to remain in the cold until a deposit formed; this was removed, and the liquid was treated with a saturated alcoholic solution of oxalic acid and filtered. The filtrate was rendered slightly alkaline with alcoholic potassium hydrate, again filtered, and the liquid concentrated on a water-bath. The salts which separated were removed by filtration, and the evaporation continued until the residue was syrupy. This was then dissolved in warm absolute alcohol, from which the potassium skatoxylsulphate crystallized on cooling. An analysis of the substance, recrystallized from boiling alcohol, gave figures corresponding to those required by theory, and this compound is probably the skatol combination previously observed by Baumann in urine.

PECULIAR CONSTITUENTS IN DIABETIC URINE.—Hallervorden has observed increased quantities of ammonia in the urine of many cases of diabetes mellitus, and Stadelmann isolated from the urine in one such case *notable quantities of crotonic acid*.* According to O. Minkowsky, however, the crotonic acid does not exist already formed in the urine, but is produced from the β -oxybutyric acid which this investigator has extracted from diabetic urine. Oxidation of this substance yields acetylacetic acid, and the existence of this substance and of the acetone, which have been noticed from time to time by various experimenters, is probably to be attributed to the previous existence of β -oxybutyric acid.

COPAIBA URINE.—The urine voided after the ingestion of copaiba balsam assumes a red color on the addition of hydrochloric acid, and gives an absorption spectrum showing three bands, one of which—in the blue—disappears on the application of heat, and at the same time the fluid acquires a violet color. Bleaching-powder, as well as tincture of iodine, accelerates the reaction, which is attributed by Brix to a terpene contained in Maracaibo balsam (Gurjun balsam), and the urine excreted after its ingestion yields the same results (C. le Nobel).

DETERMINATION OF TOTAL NITROGENIZED CONSTITUENTS OF URINE.—Th. Lehmann has investigated the application to urine of Kjeldahl's method for the deter-

* See Medical Times, vol. xiv. p. 708.

mination of the total nitrogen of animal substances. By this method the urine is evaporated with sulphuric acid, and maintained for a time at a temperature somewhat below that of the boiling-point of the acid, powdered potassium permanganate being added in small quantities. All of the nitrogen is thus converted into ammonium sulphate, and by the addition of sodium hydrate and distillation in a current of steam the ammonia is driven out and its quantity determined by any of the usual methods. Estimations by this method gave results closely corresponding to those indicated by the total urea, uric acid, hippuric acid, etc.

A SYNTHETICAL COLLOID BODY CLOSELY RESEMBLING ALBUMEN has been obtained by E. Grimaux by the action of phosphorus pentachloride on metamidobenzoic acid. After heating the mixture for an hour, the mass is treated with boiling water until the residue becomes a white, friable powder; this is moistened with ammonia; it swells and dissolves slowly, forming a liquid which filters with difficulty. After filtration it is evaporated in vacuo; it then thickens to a diaphanous jelly, and dries to a yellowish, translucent mass, which is tasteless and odorless and closely resembles the albumen of serum. The colloid so obtained swells and dissolves slightly in cold water, but is freely soluble in hot water, and its solutions can be heated to boiling without alteration. If the liquid be evaporated on a water-bath the appearance of the residue is not different from the original substance, but it is insoluble in water. Grimaux has published a full description of the reactions of this interesting body, and the following comparison of its properties with those of albumen:

A One-Per-Cent. Solution of Albumen

The Amidobenzoic Colloid

Is not coagulated by boiling; becomes opalescent.

Is not coagulated by boiling; becomes clouded after a few minutes' boiling.

Is precipitated when hot by common salt, calcium sulphate, magnesium sulphate, ammonium chloride.

Identical.

Is coagulated by heat after saturation by a current of carbon dioxide.

After the addition of sodium chloride insufficient to produce coagulation,

is coagulated by heat after saturation with carbon dioxide.

Is precipitated by acetic acid.

Is not precipitated by acetic acid.

Identical.

Is precipitated by nitric acid in the cold.

Identical.

The precipitate is soluble in ammonia, insoluble in sodium phosphate.

Identical.

Is precipitated by tannin and salts of mercury.

The same, but the alkaline solution is rather blue than violet.

With cupric sulphate, gives a precipitate which dissolves in potassium hydrate with a violet color.

Identical.

Is still soluble in water after evaporation in vacuo.

Identical.

Is insoluble after evaporation on water-bath.

Identical.

Nitric acid colors the precipitate yellow.

Properties of Solutions which have been Heated.

Precipitated in the cold by acetic acid.

Identical.

The precipitate dissolves easily in an excess of acetic acid.

Precipitate dissolves with difficulty.

Precipitated in the cold by carbon dioxide.

Identical.

The precipitate formed by carbon dioxide in the cold is redissolved on passing a current of air.

Identical.

The presence of sodium phosphate prevents precipitation by carbon dioxide.

Identical.

The conclusion of Grimaux is that physiologists are in error when they assert that the substances which are of the highest importance in the functions of life, the albumines, do not present the character of chemical combinations. Contrary to such assertions, his researches prove that the albuminoid bodies owe their complex reactions to the fact that they are colloidal bodies.

N. Simanowsky and C. Schoumoff have made some experiments on the influence of

alcohol and morphine on physiological oxidation. They have applied, as suggested by Sieber and Nencki, the oxidation of ingested benzol to phenol as the measure of the oxidation taking place in the system. The elimination of phenol lasts from two to four days. A dog which normally excreted from 0.2831 to 0.2483 gramme of phenol for every gramme of benzol ingested, eliminated only 0.1649 gramme after the administration of 0.3 gramme of alcohol per kilogramme of weight. An increase of the alcohol to 3.1 grammes per kilo of weight reduced the phenol eliminated to 0.1256; on the contrary, the administration of 0.02 gramme of morphine hydrochloride per kilo increased the phenol to 0.309 gramme. Another dog eliminated from one gramme of benzol 0.1596 to 0.1696 gramme of phenol; after the administration of two grammes of alcohol per kilo of weight, the excretion of phenol was only 0.0772 to 0.0731 gramme, but after doses of 0.01, 0.03, and 0.04 gramme of the morphine salt per kilo, the excretion of phenol was increased to 0.2228, 0.2131, and 0.2228 gramme. In a man of twenty-seven years, after the ingestion of a little more than two grammes of alcohol per kilo of weight, the quantity of phenol eliminated from the oxidation of two grammes of benzol fell from 0.8205 to 0.3301 gramme. It seems, then, that morphine increases the oxidizing powers of the system, while they are correspondingly depressed by alcohol. Alcohol appears also to diminish the quantity of urea excreted, but the elimination of urea is no measure of the oxidation going on in the organism; constriction of the air-passages, which increases the excretion of urea, diminishes the quantity of benzol which is oxidized to phenol. In neither man nor dogs could any more than traces of the ingested alcohol be detected in the urine. We may remark that these results of Simanowsky and Schoumoff are in harmony with the known thermic effects of alcohol.

THE USE OF PLASTER FILTERS FOR THE STERILIZATION OF FERMENTIBLE LIQUIDS has been criticised by P. Cazeneuve. These filters were first employed by Pasteur for the separation of microscopic organisms from the liquids in which they may be suspended, and have been largely used for *cold sterilization*. They are made by simply allowing plaster mixed with

water to harden in a funnel; after drying and subjecting to a proper degree of heat, the funnel is adapted to the cork of a bottle in which a vacuum can be made. Under the pressure of the atmosphere, the liquid is forced through the pores of the plaster, while the solid particles, no matter how small they may be, are retained. The plaster is usually mixed with asbestos, and the filters are prepared with great care. The small quantity of calcium sulphate dissolved out by the liquid has been found to exercise an antiseptic action, and, as Miquel has stated, porous porcelain filters are preferable for this reason.

Cazeneuve now shows that the plaster retains albuminoid matters: milk, blood, and bile, diluted with ten times the volume of water to render filtration more rapid, are completely deprived of albumen by passing through a plaster filter. If the filtration be continued for a sufficient time, however, the pores of the filter become saturated with the albumen and allow albuminoids to pass, but the filtration is slow and difficult. In the same manner an albuminous urine gave up all of its albumen to the filter. The plaster acts chemically, for it forms combinations with certain albuminoid substances. The action of plaster on legumine and on the albumen of barley is well known. At the same time, however, the plaster acts mechanically by its capillary structure, and removes from the liquids the colloids which they hold in solution.

The method of cold sterilization which is desired must leave the albuminoid matters in the liquid, for they are necessary to the development of certain microbes. In this respect plaster filters are faulty. They are open, moreover, to a more serious reproach: they retain the soluble ferments,—that is, the diastases. When it is necessary to decide whether a fermentative liquid owes its activity, perhaps its poisonous properties, to an organized being or to a chemical principle such as diastase, the separation of micro-organisms by plaster filters is essentially at fault. The diastase of sprouted barley, the myrosin of white mustard, the synaptase of bitter almonds, pepsin, and the diastase produced by the *torula urinae* are all retained by plaster filters, as proved by numerous experiments.

The consequences of these results are important in the theory of fermentations

and of the virulence of fermenting liquids. The question whether a micro-organism acts by its own functions, ill defined as these may be, or, secondarily, by reason of a chemical compound secreted by it, in which case the action becomes chemical or physiological, cannot be decided by experiments in which plaster filters are employed. These criticisms apply to Pasteur's celebrated observation on the bacteria of *charbon*, for he employed plaster filters for the separation of the bacteria from the blood. The filtered liquid was no longer virulent, but whether the virulence is due to the bacteria or to a poison secreted by the bacteria is left in doubt, for both are retained by the plaster.

M. Cazeneuve states that porcelain filters are not open to this objection to those of plaster, and in this he is confirmed by M. Armand Gautier, who publishes the description of a new filter of unglazed porcelain, in which all of the joints are made with a fused boro-silicate of lead. With these filters M. Gautier claims to have obtained perfectly satisfactory results.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

SERVICE OF WM. PEPPER, M.D., LL.D.,

Provost of and Professor of Clinical Medicine in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

EPILEPSY.

GENTLEMEN,—This little girl has been before you on one or two occasions. Let me recall to your minds the more important features in her history. She is 10 years of age, born of healthy parents, with no inherited morbid tendency, and lives in a healthy neighborhood. Up to the age of five years she was apparently healthy, but at this time it was noticed that she was "nervous" when her attention was strongly fixed. There is no history of severe sickness or other cause to account for this. Shortly after this it was noticed that the child began to have falling-spells, and these would sometimes recur as often as two or three times a day, and at no time did she go a week without an attack. In these seizures she would fall to the floor if there was no one

at hand to support her, and she evidently lost consciousness for the moment, for she would assert that some one had thrown her down. There was no general convulsion, but for a few minutes there would be trembling of the hands. She did not froth at the mouth or roll the eyes, but after the attack had passed she became very red in the face.

She was brought to the hospital four months ago. At that time she was having the spells very frequently, and the mother could not trust her out of her sight. Her memory was also much impaired.

The story of this case is one of apparently essential epilepsy. No peripheral cause can be found for these attacks. The child has no heart-disease; there is no history of an injury or of a sudden shock of any kind, but gradually, without apparent cause, she at the age of five years began to have these attacks, which continued to increase in frequency until four months ago.

At that time, learning that the girl had been under the care of the family physician for some time, I concluded that the bromides had been thoroughly tried. The child was exceedingly feeble; she would drop down on the slightest exertion, and many of the falls were undoubtedly the result of muscular prostration and debility. There was also to a remarkable extent a want of mental activity. The child was listless, and her memory was rapidly failing. Concluding then that the bromides had been used, I considered it useless to push them. I thought it better to direct attention to hygiene, diet, the administration of tonic remedies, and trust to the development of the system, rather than attempt by specific remedies to coerce the manifestations of the disease.

I ordered a properly-regulated diet and the use of a simple solution of the phosphates of soda, lime, and iron in an excess of dilute phosphoric acid. The child had no other treatment.

The mother reports that there has been decided improvement. The attacks do not recur so often, a week frequently intervening between the attacks. The disease is, however, far from being checked, but we are encouraged to persist in the plan of treatment adopted. In the mean time the child will be kept from school, the mother teaching her at home.

GASTRALGIA.

This man, a farmer, aged 39 years, has been sick for two years. His principal complaint is of pain in the left side. He has lived in a healthy locality, and has never had chills and fever. The pain begins in the left side and runs back to the left shoulder-blade. If he eats too much he suffers, but the kind of food taken does not appear to influence the pain. An ordinary meal does not make the pain worse, and eating sometimes takes away the bad feelings. Active exercise or riding over a rough road is apt to bring on the pain. The appetite is fair. The bowels are sometimes constipated, but as a rule he has diarrhoea about twice a week, there being two or three loose stools, but these contain no blood. He weighs one hundred and fifty pounds. His best weight was one hundred and sixty-two pounds, but during the summer he goes as low as one hundred and forty pounds.

Let me here refer to this matter of variation of weight. Many persons will be met with who have a wide range of what may be called normal weight. I never like to see this symptom, for it seems to me that those persons who lose flesh so rapidly cannot be made of very good stuff. A person whose flesh is solid and who is living a correct life should maintain pretty nearly the same weight summer and winter, varying perhaps from three to five pounds. Persons will, however, be found whose weight varies twelve or fifteen pounds at different periods of the year. With such persons I have observed that sickness goes hard; on the other hand, loss of weight in them is not to be regarded as of such serious moment as it would be in a person who was thoroughly in training and whose flesh was solid and well organized.

In reference to the pain complained of, when this pain is in the right side, we naturally suspect some trouble with the liver, —a gall-stone in one of the smaller ducts or in the gall-bladder; some congestion of the liver, causing dragging on the suspensory ligament, or irritation of the capsule of the organ. When the pain occurs on the left side, we think of the spleen, pleura, and heart, and when, as in this man, the pain associates with some shortness of breathing and overaction of the heart, we are apt to think more particularly of the heart. Examination of the

heart shows it to be perfectly normal. There is no enlargement of the organ, no displacement of the apex-beat, and the valvular sounds are free from murmur. Neither is there any evidence of chronic pleurisy. There is good respiratory murmur and resonance over the left side. Examination of the spleen shows that the organ is not enlarged, and the man has not lived in a malarious district.

Before satisfying ourselves that this is merely a neuralgic trouble (possibly a form of gastralgia), some obscure conditions must be thought of. One of the most insidious of these, and one against which we should be continually on our guard, is caries of the spine. Caries of the anterior surface of the vertebræ constantly reveals itself by pain and distress in the neighborhood of the spinal column. Many cases of sciatica or intercostal neuralgia will be found to be due to caries of the anterior surface of the vertebræ, and the diagnosis should not be made until a sudden increase of the symptoms, with some numbness and failure of power in the lower extremities or the appearance of an angular projection, calls attention to the real cause of the trouble. You will do well to be on your guard against the occurrence of this obscure lesion. Aneurism of the descending aorta is another condition to be excluded.

There is no tenderness along the spine, neither is there any projection of the vertebræ, and jumping does not cause pain. No pulsation, thrill, or abnormal dullness can be detected. Caries of the spine and aneurism may therefore be excluded.

You observe that the pain is described as occurring in the right side and over the stomach; it is not markedly affected by eating, although radishes and some other articles make it worse, and it is worse when the stomach is empty than it is after an ordinary meal. It is associated with evidence of derangement of intestinal digestion, as shown by flatulence and irregular action of the bowels, sometimes constipation and sometimes transient attacks of diarrhoea. Having excluded the graver causes for this pain, we must conclude that it is neuralgic and occupies the stomach, and therefore a form of gastralgia.

As to the cause of this, the family history is good, and he has had good health until this affection developed. He does not use liquor or tobacco; he has not been

overworked, but has gotten into the habit of eating his meals hurriedly. The gastralgia has probably been brought on by this rapid eating.

In the treatment of gastralgia the regulation of the diet is the chief element. The stomach is rarely able to receive and handle enough food in three meals to support the system; consequently it is important that such patients should take more than three meals in the twenty-four hours.

Again, the stomach is so hyperæsthetic and the mucous membrane so irritable that unless some digestible substance is in the stomach the acid juices are apt to excite pain, and hence the pain is more marked when the stomach is empty, and the ingestion of food affords relief; so that for this purpose, also, it is desirable to give food oftener than three times a day. Meals of smaller amount, and of extremely simple character, and at shorter intervals, is the rule for the nourishment of gastralgic patients.

The character of the food requires very close attention. In general, it will be found that milk is one of the best ways in which to give nitrogenous and albuminoid food. The starchy foods are, as a rule, well borne, particularly because they do not require much gastric digestion, being digested, as you know, by the salivary, intestinal, and pancreatic fluids. At times, however, the starchy foods lead to the development of secondary acids in the stomach, in which case it becomes necessary to diminish the amount of starch allowed and increase the amount of skim-milk, the patient being practically placed on an exclusive milk diet for a certain length of time. Alkalies are often desirable, and lime-water mixed with the milk is a convenient way of administering these.

I shall recommend for this man the following dietary:

Breakfast.—Soft-boiled egg, oatmeal, bread and butter, and milk with lime-water. Between breakfast and dinner, a glass of milk and lime-water.

Dinner.—Potatoes, bread and butter, milk and lime-water, but no meat. Between dinner and supper, a glass of milk and lime-water.

Supper.—Mush and milk, with milk and lime-water to drink.

In selecting the remedies to be associated with this diet, you will be governed by your appreciation of the state of the

mucous membrane more than by anything else. If there is no evidence of gastric catarrh, if there is simply the hyperæsthetic neuralgia and anæmic condition of the stomach, iron, arsenic, and belladonna may be given at once with confidence, the stomach being sheathed with bismuth taken at proper intervals after eating. Under such circumstances, a pill containing the following might be given:

R Quinæ sulph., gr. j;
Acidi arseniosi, gr. $\frac{1}{30}$;
Pil. ferri carb., gr. j;
Ext. belladonnæ, gr. $\frac{1}{10}$.

M. et ft. pil. no. i.

Sig.—To be taken after food, three times a day.

Any of the vegetable salts of iron may be substituted for the pill of the carbonate. In addition to this, ten grains of bismuth should be given two hours later, to protect the stomach when most empty.

If there be a catarrhal condition of the mucous membrane, as shown by a coated tongue, distress in the stomach, in addition to the paroxysmal pain and evidences of dyspeptic trouble, we are obliged to adapt our remedies to this condition, postponing the use of anti-neuralgic remedies until the inflammation of the mucous membrane is relieved. In such cases bismuth with pepsin, dilute mineral acids, carbolio acid, and salts of silver become exceedingly valuable for their antacid, sedative, and alterative properties.

For this patient, having directed a careful diet with an alkali, we shall order minute doses of nitrate of silver with belladonna.

Two weeks later, the patient reported much improved, and the pill of quinine, arsenious acid, and iron above given was substituted for the nitrate of silver, the same diet being continued.

TREATMENT OF INTESTINAL HEMORRHAGE OF TYPHOID FEVER.—At a recent clinical lecture, Professor Da Costa exhibited specimens from a case of typhoid fever in which death had occurred from peritonitis, with three recent perforations of the bowel. The patient four days before his death had had a profuse intestinal hemorrhage. The distinguished teacher took the opportunity of endorsing the ergot treatment of the hemorrhage, but insisted upon the importance of following it up with decided doses of opium in order to prevent perforation or to limit its effects.

TRANSLATIONS.

THE MEDICAL TREATMENT OF PULMONARY CAVITIES.—Professor M. Trastour, of Nantes, concludes an interesting clinical paper upon the medical treatment of vomicae in the lungs with the following practical deductions. Given a case, tuberculous or not, which has had and still has pus in the lung, the pleura, or mediastinum, which pus is evacuated through a vomica, and sometimes through thoracic fistulae,—a case in which there is no urgency, necessity, nor opportunity for thoracentesis, aspiration, or resection of the ribs,—what is the medical treatment to prescribe? This query he answers as follows: *First indication.* The suppuration can only cease if the walls of the pus-cavity retract sufficiently for cicatrization; for this it is required, on one hand, that the lung shall dilate, on the other, that the thoracic wall shall yield and become deformed. In some cases this deformity is very marked; and such depressions at one point or over one side of the chest are sometimes both striking and instructive, as noticed and figured by Laennec. The leaning to the affected side, the dropping of the shoulder, the diminution of the anterior and posterior muscular layers of the thorax in the young, a tendency to lateral deviation of the spine, and prominence of the scapulae and sometimes the compensating fulness of the opposite side of the chest, were all noted by him also.

Chronic pleurisy, thoracic abscess, and tubercular cavities may all produce deformities of the chest in subjects that are still young. The chest, said Laennec, must retire to make up all of that which the enfeebled lung is unable to furnish by dilating. The first indication of medical treatment of vomicae is, therefore, to favor the sinking of the chest-wall until cicatrization can occur, while diminishing as much as possible the inevitable deformity. To accomplish this what will be necessary?

First, empty carefully the cavity as completely and as frequently as possibly can be done. For this inversion has been practised with good results. Prescribe and obtain the frequent practising of deep inspirations, made methodically, in order that the lung may be made to expand.

Secondly, the disposition to the forma-

tion of pus must be combated; for which iodine preparations are recommended.

The third indication is to prevent emaciation by giving a liberal, easily-assimilated diet.

Fourthly, auto-infection must be guarded against by antiseptics and disinfectants. A glycerin spray, with or without carbolic acid, is very grateful to the patients.

Fifthly, revulsives are useful over the affected area of the lungs.

In the sixth place, and finally, he insists on the value of living in the country and of breathing pure air. He recommends to those suffering with empyæma that they should breathe the air of the fields, or even, as an experiment, to try that of the sea-shore when a favorable opportunity presents.—*Bull. Gén. de Thérapeutique.*

IODOFORM IN TUBERCULOUS ULCERATION OF THE LARYNX.—Drs. Kussner, of Halle, and Frankel, of Berlin (*Journal Méd.-Chirurg. de Buda-Pesth*), highly recommend the employment of iodoform in the laryngeal ulceration of phthisis. The former uses a ten-per-cent. solution in glycerin, applied by a small piece of cotton, and also an inhalation three or four times a day of the following:

R Iodoformi, one gramme;
Spts. vini, ten grammes;
Aqueæ, fifty grammes. M.

This can also be used in the atomizer. It is claimed that under this treatment the ulcers clean off and proceed to repair, but the general condition is also much improved: (1) the cough is reduced and expectoration diminished; (2) the hectic fever is reduced.

Dr. Kussner, on the contrary, has not found that the physical signs of phthisis are modified, but, although iodoform cannot be regarded as a specific, some cases are much benefited, because it retards the evolution of the disease and causes the disappearance temporarily of some of the symptoms.—*Bull. Gén. de Thérapeutique*, October 15.

THE USE OF ANTIPYRINE HYPODERMICALLY, it is claimed, causes neither general nor local inconvenience (*Centralblatt für der Gesamt. Therapie*). The best solution for this method of administration is said to be one gramme of antipyrine in fifty centigrammes of water, dissolved with the aid of heat.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 15, 1884.

EDITORIAL.

EXPERT MEDICAL WITNESSES.

OF medical experts upon the witness-stand it might almost be said, repeating Whately's criticism of Whewell, that "Science is their forte, omniscience their foible," for your medical witness usually expresses his opinions with as much assurance upon purely legal questions as he does upon medical matters, assuming at once the functions of counsel, judge, and jury. This unfortunate propensity is often utilized by counsel in order to discredit the testimony of the witness upon other and purely scientific questions. We were pleased, however, to notice, during a recent criminal trial in this city, that Prof. Wood, when upon the witness-stand, recognized this distinction; and when asked "If he thought the prisoner responsible for the deed?" he at once referred the question of technical responsibility to the court itself, where it really belonged.

To show the status of the expert witness, we may also note that during the same trial an officer of the prison, not a medical man, was put upon the stand to testify concerning the mental state of the prisoner at the time of committing the murder, and his years of experience with criminals were ingeniously paraded by counsel, obviously, in order to put him before the jury in the same light as the medical witnesses whose testimony he was brought forward to oppose. Apparently the non-medical testimony was sufficient to outweigh that offered by the medical experts, because the jury brought in a verdict of guilty of murder against the poor criminal, although he was believed to be insane by competent medical wit-

nesses, and had been so pronounced after more than one careful examination.

It is quite time that some change had been made in our prevailing methods of taking medical testimony. The facility with which many physicians can be induced to go upon the stand in order to directly oppose the testimony of their brother-physicians brings discredit upon medical science and disgrace upon the profession. It is this practice which has led a judge to declare slightly that "doctors could be obtained to swear to anything," and which has especially confused the public mind upon great medico-legal questions, such as how far legal responsibility may be affected by different degrees of mental unsoundness. Since medical questions must occur, and since they can only be answered by physicians, it will continue to be necessary to have medical experts to instruct the court. We are entirely opposed, however, to the present loose method of selecting them, and particularly to their being pitted against each other by opposing counsel, to the great scandal of the profession. A change in the practice might be made which would be more in keeping with the dignity of the profession, and would aid, or certainly not retard, the course of justice. Instead of wrangling openly in court, let the experts selected by the counsel upon both sides, perhaps with the addition of one appointed by the judge, form a medical commission, to whom purely medical questions shall be referred for consideration and decision in private session, the responsibility of acting upon their conclusions being left to the court. If, for instance, it be in a case of supposed insanity, the commission would communicate simply the result of the medical examination to the court, leaving the degree of responsibility and the question of punishment where it belongs.

The appointment of medical examiners, in place of that obsolete functionary

known as the coroner, would greatly facilitate the solution of such questions, to the great satisfaction both of the profession and the public. We commend this question to the medical societies for agitation.

GLOSSO-LABIAL PARALYSIS.

MODERN thought and research drift more and more to the position that the affection described by Duchenne as glosso-labial paralysis, and long supposed to be distinct, ought to be stricken from the list of diseases. In its typical form it is certainly only a localized chronic poliomyelitis, a mere variety of chronic muscular atrophy, in which the gray portion of the upper segment of the spinal cord—i.e., the medulla oblongata—is especially attacked. It may exist by itself, or it may be associated with symptoms of palsy, due to poliomyelitis, in other parts of the body. In the latter case the medulla may be the first part of the cord invaded, the disease extending downwards, or the lesion may progress upwards and the medulla show the latest change. In a very interesting case recently shown at the clinic of Prof. H. C. Wood, the first symptoms were perceived by the patient in the mouth region, and subsequently the cervical cord became profoundly affected.

To grant these labio-glossal paralyses a separate state in our classification of disease would logically require similar treatment for cases of progressive muscular atrophy in each part of the body, since any spinal region may be attacked alone or separately.

The absurdity of the present separation of glosso-labial palsy is further shown by the circumstance that we may have such paralysis due to various apoplexies, brain-tumors, and other coarse cerebral lesions, and, to be logical, we should also isolate as a distinct disease cerebral glosso-labial paralysis.

In No. 20, *Archives de Neurologie*, is an important paper upon such an affection, by Dr. F. Raymond, in which illustrative cases are cited. The symptoms may, in case the lesion is a tumor, or other progressive alteration of brain-tissue, develop slowly, but they usually come on suddenly, because they are usually the result of clot or other apoplectic lesion, and, while they may develop alone, they are usually associated with other consentaneous palsies. Whether the manifestations come on slowly or rapidly, the cases are to be distinguished from those of medulla-disease by the absence of atrophic changes in the muscles affected, and by the preservation of the normal electrical reactions. The symptoms are stationary or progressive, as the case may be, *pari passu* with the cerebral lesion. The latter is either cortical or in the white matter. The general localization of the lesion of the white matter is in the lenticular nucleus or the external capsule, or sometimes in the internal capsule or peduncle. The foot of the ascending frontal convolution is stated to be the position in which cortical lesions cause the glosso-labial palsies.

SALT vs. SNOW IN THE STREETS.

THE City Councils, having solicited medical opinion as to the influence upon the public health of salt when used to melt the snow between the street-car tracks, have been supplied with opinions of decidedly diverse character.

As regards the question as to its causing zymotic diseases like diphtheria, we think that it will be generally admitted that chloride of sodium is more likely to prevent such disease than to propagate it. Indeed, any malign influence that it is capable of exerting must be exceedingly small, since the few steps that could possibly be taken by the pedestrians at the street-corners when crossing the tracks could scarcely affect the temperature of

the feet. If the inlets are kept open, so that the slush is rapidly carried away, we think that salting the track would be an advantage to the public health by aiding in keeping the streets comparatively free from snow and ice.

NOTES FROM SPECIAL CORRESPONDENTS.

NEW YORK.

THE medical colleges of this city have begun the regular course with about the same number of students and under about the same circumstances as last year. To this general statement we might add a modifying one as regards the Polyclinic and the Post-Graduate School, both of which have improved buildings and facilities for instruction over those which they possessed at the commencement of the term last fall. The Post-Graduate faculty bought and refitted a building at 226 East 20th Street, which, it is understood, is used as a college and hospital combined. The building contains a large number of compartments, so that each professor can have a room for himself in which to give instruction without the disturbances which are always likely to occur in a general lecture-hall. Dr. E. Kershner has been appointed Professor of Naval, Military, and State Hygiene.

Dr. Thomas A. McBride now shares the chair of Diseases of the Mind and Nervous System with Dr. Gray at the Polyclinic. Dr. McBride is known as a conscientious and hard worker: he will add strength to the college. The building formerly occupied by the faculty has been purchased and refitted, and now possesses nearly all the advantages which could be desired for giving post-graduate instruction. We might mention, for example, a large room with accommodations for more than thirty students to study diseases of the eye, throat, and nose, and of the ear, all the necessary apparatus being at hand. The school has a third more students than at any previous term, including professors of colleges,—among others, one from Mexico is seen, accompanied by his interpreter.

The College of Physicians and Surgeons is the recipient of the magnificent donation of five hundred thousand dollars from the hand of Mr. William H. Vanderbilt. A new building, about two hundred by three hundred feet, will be put up opposite Roosevelt Hospital. The college has an excellent faculty, and, with its new facilities, will doubtless do even more than it has been doing towards the elevation of medical education, and, in-

directly, towards diminishing the sufferings of humanity.

At the last meeting of the New York County Medical Association Prof. Austin Flint read a paper on "The Parasitic Theory of Epidemic Cholera," in which he gave an excellent *résumé* of the facts and arguments for and against Koch's doctrine. Dr. Flint pleaded for a greater amount of original work in the study of the parasitic origin of diseases by American physicians, suggesting, if not prophesying, that in this field the honor of making permanent and important discoveries was to be obtained.

The health of New York at present can well be said to be good, and yet the Sanitary Bureau reports forty-two cases of typhoid fever for the week ending October 14, and fifty for that ending October 21, and of diphtheria there have been, for the same weeks, forty-five and forty-three cases respectively. The death-rate from diphtheria is pretty large, being, for the first week mentioned, twenty-nine, and for the second thirty.

The New York Obstetrical Society has re-elected Dr. William M. Polk President for another year.

The new local anæsthetic, hydrochlorate of cocaine, is being extensively tested in this city, particularly by the eye-specialists. They report favorably upon its action. Country physicians will do well, for the present at least, not to order it in pound quantities, unless they do business on the credit system.

R. C. S.

PROCEEDINGS OF SOCIETIES.

AMERICAN ACADEMY OF MEDICINE.

THE Ninth Annual Session was held at Hopkins Hall, Baltimore, October 28 and 29, 1884.

The Academy was called to order at three o'clock by the President, Dr. Benjamin Lee, of Philadelphia, who invited the Rev. J. E. Grammar, D.D., to open the session with prayer. The minutes of the last session, and the report of Council showing their action since the last meeting, were read and approved.

The following gentlemen, applicants for fellowship, having been approved by Council, were balloted for and elected: Drs. I. H. Baxter, Washington, District of Columbia; G. W. Miles, Perryville, New York; A. B. Tadlock, Knoxville, Tennessee; E. E. Barnum, Waterport, New York; C. W. Stevens, Boston; John A. Robinson, Chicago; L. L. Miner, Wilkesbarre, Pa.; H. A. Johnson, Chicago; F. S. Johnson, Chicago; J. W. Holland, Louisville; H. P. C. Wilson, Baltimore; W. W. Jaggard, Chicago; Charles Warren, Washington; J. N. Hyde, Chicago; Ira B. Reade, New York; L. S. McMurtry, Danville, Kentucky; E. O. Shakespeare, Phil-

adelphia; Douglas Morton, Louisville; M. P. Hatfield, Chicago; T. E. McArdle, Washington; S. M. Free, Dagus Mines, Pennsylvania; F. R. Graham, Chester, Pennsylvania; W. P. Watson, Jersey City, New Jersey; J. G. Young, Philadelphia; Joseph Coblenz, Baltimore; J. S. Green, Elizabeth, New Jersey; J. M. Stevenson, Pittsburg, Pa.; David Brekes, New York; E. L. Keyes, New York; E. Andrews, Chicago; E. A. Andrews, Chicago; C. Kollock, Cheraw, South Carolina; W. Murray Weidman, Reading, Pennsylvania; T. C. Stellwagen, Philadelphia; M. E. Wordin, Bridgeport, Connecticut; G. R. Morehouse, Philadelphia; E. Cowles, Somerville, Massachusetts; F. H. Davenport, Boston; E. O. Otis, Boston; T. J. Turner, Washington; T. B. Brune, Baltimore.

Drs. Bulkley, Steiner, and Bombaugh were appointed a Committee on Nomination.

The first paper of the afternoon was by Peter B. Keyser, M.D., of Philadelphia, entitled "The Relation of the Medical Colleges to Preliminary Education." This relationship was deduced from the statements made by the various colleges in their announcements, and examining those statements and the method of their execution. It appeared that but comparatively few of the ninety-one medical colleges in our country made pretence to preliminary education of any value whatever, and even among the few but a small proportion rigidly enforce their own requirements.

"The Examination of Applicants for License to Practise: A Means of Raising the Standard of Medical Education" was the title of the next paper, presented by Edward Jackson, M.D., of Philadelphia. (See page 85.)

Henry O. Marcy, M.D., of Boston, was the author of the third paper of the afternoon, having for its title "The Rôle of Bacteria in Infectious Disease." There is no subject in medicine, either in relation to its theory or practice, of greater interest, and much has been written about it,—so much, indeed, that this paper would not have been written had it not been for the assertion of "not proven" in one of a series of semi-popular lectures delivered in Boston, where the assertion was made that even in fermentation it could not be asserted to be caused by the development of a low order of vegetable organisms. This verdict was based upon the assumption that the micro-organism in any series of experiments had never been separated from the ambient organic living matter, which must be considered to have a low degree of inherent vitality, and that not until a well-washed micrococcus or bacillus had been isolated upon the point of a needle and then introduced into a sterilized nutrient solution would the real condition of the problem be fulfilled.

Since anything may be doubted, it is often well to re-examine the foundations, for science is only pure and simple truth, and never

suffers by testing. The author determined to make a few experiments in the direction of the objection; for while negative truth may be as valuable as positive demonstration, the latter should not be neglected. Recognizing in the term "ambient living matter" the bioplasm of Beale, a set of experiments were conducted to determine the bioplastic power of protoplasmic matter. The blood of healthy oxen and sheep was selected, and collected under proper precautions as soon as the clot had separated; sterilized glass bulbs were filled and sealed with the flame, and others charged with sterilized culture-fluids were inoculated in varying proportions. These were kept for differing periods of time, subject to the same conditions as for the growth and testing of various bacterial organizations, and careful examination made at different dates by means of a Zeiss one-fourteenth objective giving an amplification of about one thousand diameters. In twenty bulbs change took place only in one, and in this one, upon its first opening, on the third day, there was no change.

Still further experiments were made with albumen from an egg still warm from the nest, milk aseptically milked and put up at once, and the aqueous humor from the eye. In a series of forty-one bulbs only two contained bacteria or micrococci, which were evidently accidentally introduced. It seems fair to deduce that this ambient living matter possesses no power of reproduction, which has been usually accepted, in fact.

At present no one denies that the micro-organisms exist: whether they are or are not the cause of disease is a question of importance. If the relationship of cause and effect can be demonstrated in the class of zymotic diseases, medicine will at last have a scientific foundation. Although science is pure and simple truth, we have here a very difficult problem, where probably at present generalizations are premature, but from the accumulated facts of many independent investigators he believed that such demonstration is in the near future.

To establish the action of micro-organisms they must be separated from everything else, whether living ambient matter or a chemical poison having relation to disease. This organism thus separated must, upon inoculation in the tissues of a healthy living animal of the same species, cause a reproduction of the disease.

To separate the micro-organism fully, the process of pure culture has been devised, so that in some of Dr. Sternberg's experiments less than one-quadrillionth of the original septic material remains in the eighth culture; yet a few minims of this possess all the virulence of the first, and the action is entirely different from that of a chemical poison.

With this demonstration the author passed in review the various diseases which are

proven, to a greater or less degree, to be dependent upon septic action. It may be concluded from this review that the time has passed when the critic of the germ theory of disease can content himself by captious remarks.

"The Trade-Aspect of Medicine," by Albert L. Gihon, M.D., was the next paper. (See page 116.) The object of the paper was to show the great tendency of the times to belittle the profession of medicine to a trade in medicine, to show the meanness of so doing, and to suggest a better way.

This was the last paper for the afternoon, the Academy going into executive session, when a resolution was adopted that a committee of two be appointed in each State where the Academy has Fellows, for the purpose of suggesting and furthering the appointment of independent examining boards.

THE PRESIDENT'S ADDRESS.

The evening session was given up to the President's annual address. Vice-President Gihon presided. The subject of Dr. Lee's address was, "Differentiation the Test of Civilization: The Specialist and his Education."

In selecting a topic for the annual address the President cannot go far astray if he selects some topic of an educational character, since the Academy should keep on striving until every practitioner is as well a gentleman and a scholar. He had selected the Education of the Specialist as a topic fitting the occasion and the place, since in Baltimore special practice was first recognized. In Baltimore was the first school of dentistry in which this specialty was treated as really a branch of the medical profession. In the development of any nation from barbarism towards civilization a division of labor keeps equal step with the advance, and thus increases the skill in all trades, manufactures, and business. In the learned profession the same principles have been at work, but the process has received more or less opposition,—more in this country than abroad. Thus, in England there are several recognized classes of lawyers, each with special qualifications. The same is true here, but they have all the same title.

The science of medicine is expansive, while law and theology are fixed, and yet the opposition has been stronger to separation in medicine than in the other professions. The arguments against the practice of specialties may be classed under three heads: 1st. The multiplication of specialties has a narrowing effect upon the doctor practising the specialty. 2d. It degrades the profession. 3d. It is not best for the patient.

On the other side it is claimed that specialism is nothing new, strange, or foreign. Medicine itself is a differentiation, for in times past the priest and physician were one. Then there are surgeons, physicians, obstetricians,

and alienists. Why not carry the division further? The day of the cyclopædist is over, and men are not able to be proficient in the whole circle of medical science. Why should they not concentrate upon a portion? The more specialized the animal, the more important it is; so in social life, the more complex it becomes, there is the greater need for specialists. Here, as elsewhere, differentiation is a test of civilization. The defence calls witnesses and asks if there have not been important contributions to medical knowledge from the studies of specialists. So are the arguments, and in whatever way we may look at it two facts seem patent,—the specialist has come, and he has come to stay. And whether we think of him as the product of a degenerated race or the flower of the profession, we ought to make the best of him. What shall he be, a physician and something more, or something less than a physician? He should have, if possible, even a better preliminary training than the general practitioner; the self-consciousness of a dwarfing due to the special line of study is belittling, and his preliminary education should be broad. As to his medical education, he has use for all of the old seven sets of subjects, except, perhaps, obstetrics, for this is a special study; and, as he is apt to see disease in its more chronic form, the residency in a general hospital where acute forms of disease can be seen would be of use. Then comes the special training, whether at Alma Mater or in a polyclinic. With such a training a specialist will not threaten the profession.

At the conclusion of Dr. Lee's address the Fellows adjourned to the Athenæum Club, where they had their annual collation, having a most enjoyable time.

SECOND DAY'S SESSION.

The Council recommended the election of Drs. George M. Sternberg, U.S.A., and Oliver Wendell Holmes, of Boston, as honorary members, and the following gentlemen for fellowship: Drs. R. J. Levis, of Philadelphia; J. W. Kerr, of York, Pennsylvania; Alexander Hadden, of New York; and J. D. Kelley, of Utica, New York; making forty-five in all.

They also presented a series of amendments to the constitution and by-laws for the purpose of making another class of members,—Associates, who shall consist of those who have attained distinction in medicine and the collateral sciences and do not possess the degree in arts, the qualification of a Fellow. These lie over under the rules until the next session. The following resolution was adopted:

"Resolved, That the American Academy of Medicine recognizes in the recent munificent gift of Mr. W. H. Vanderbilt to the College of Physicians and Surgeons of New York a most important and valuable service to the science of medicine in America.

"That in this spirit the Academy tenders to Mr. Vanderbilt its obligations, with the assurance that in no better way could the higher education of our profession and the benefit of humanity be promoted."

The nominating committee presented the following report, which was accepted and the gentlemen elected:

President.—Albert L. Gihon, M.D., U. S. Navy.

Vice - Presidents.—R. Stansbury Sutton, M.D., Pittsburg; James A. Stewart, M.D., Baltimore; William Elmer, M.D., Bridgeton, New Jersey; J. Cheston Morris, M.D., Philadelphia.

Secretary and Treasurer.—R. J. Dunglison, M.D., Philadelphia.

Assistant Secretary.—Charles McIntire, Jr., M.D., Easton, Pennsylvania.

The first paper of the morning was by A. D. Rockwell, M.D., of New York, on "The Induction Coil: its Varieties, and the Differential Indications for their Use."

By means of diagrams the two kinds of induction coil, the separate and continuous coils, were explained, and a preference was expressed for the latter form, from the ten currents, of which the author had separated three capable of performing the work of the whole ten.

First.—The current obtained from the primary coil of large quantity and small tension, having little contractile power upon muscles in health; useful in head-neuralgia and asthenopia.

Second.—The combination of the primary coil with the first and second induction coil, giving a current which has the maximum power to contract muscles, each additional coil weakening it in this direction. It is harsh and unpleasant, and of use when a profound impression is desired.

Third.—A combination of the primary in connection with all three induction coils. Very important tonic and sedative in character; to be used in general faradization.

"Some Comparative Results of Treatment of Chronic Articular Osteitis of the Hips," by V. P. Gibney, M.D., of New York, was read by title and referred to Council.

C. C. Bombaugh, M.D., of Baltimore, read the next paper, entitled "The Place of the Physician in Literature." This paper, by careful quotations concerning doctors from the writings of all time, was a means of "seeing ourselves as others see us," and, by analyzing the criticism and satire, showed clearly that there was much foundation for the sport made of the profession, while, unfortunately, the profession were not always willing to profit by the portrait. Looking about us, there seems to be ample opportunity for other Molières, unless the profession improve and are wise to learn.

"Observations in One Hundred and Thirty-seven Abdominal Sections" was the title of

a paper by R. Stansbury Sutton, M.D., of Pittsburg.

The cases upon which these observations were founded were operated on by various operators in America and Europe, and comprised the various forms of abdominal section.

McDowell's operation, as a rule, is performed upon patients of the poorer class, in this country, not until late, when the health is broken down; in Scotland, England, and Germany earlier, and in a special hospital; in Austria not so early, and in the general hospital, where the successes are not so great. The author favors the English plan. An ovariectomy done early may be considered one of the easiest of surgical operations; but a neglected case is a very different affair. After the completion of the operation it is most important to leave the peritoneal cavity perfectly dry. As a rule, the younger subjects do best, but older people bear the operation well. Climatic influences seem to have but little effect upon the success of the operation. Cleanliness to the last detail must be insisted upon. The prevention of the loss of blood is of the greatest importance. Drainage in intra-abdominal operations should only be resorted to when from any cause fluid might be poured into the cavity. Abdominal operations are growing in frequency every year, and after excluding pregnancy, renal and heart disease, there is a tendency not to attempt a diagnosis of the character of the tumor until after section.

The author strongly recommends the selection of cases for operating, refusing those who have been tapped so often that success is almost impossible, for the purpose of putting a stop to the operation of tapping by the family practitioner, and because a fatal operation is apt to deter others who would probably have a favorable result.

At the conclusion of Dr. Sutton's paper the Academy took a recess to visit the laboratories of Johns Hopkins University.

Upon reconvening, after a discussion upon Dr. Sutton's paper, L. Duncan Bulkley, M.D., of New York, read a paper on "Specialties and their Relation to the Medical Profession," in which the author concluded that the science and art of medicine was too vast for one mind; so there must be divisions of study. But the foundation should be one. A man should rather grow into special practice than be pruned into shape for it.

"Physiology in its More Public Relations," by Nathan Allan, M.D., of Lowell, Massachusetts, was read by title, and referred to Council. Telegrams were received from Drs. Knapp and Chrystie, of New York, expressing their regret at their inability to be present with their papers.

The report of the Committee on Laws regulating the Practice of Medicine was read in part.

Dr. Lee introduced the President-elect, Dr. Gihon, who appointed Drs. L. Duncan Bulkley and E. H. M. Sell, of New York, as additional members of Council.

Votes of thanks were given to the retiring President, Dr. Lee, and the authorities of Johns Hopkins University, and the Academy adjourned.

After adjournment the Fellows visited the Johns Hopkins Hospital, under the guidance of Dr. J. S. Billings.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held October 16, 1884, FORDYCE BARKER, M.D., LL.D., President, in the chair.

The President invited Dr. JOHN SCOTT, of San Francisco, to take a seat on the platform.

Dr. H. MARION SIMS presented to the Academy a BRONZE BUST OF DR. J. MARION SIMS, it being a copy of a marble bust by the eminent Parisian sculptor, Du Bois.

Dr. WILLIAM H. DRAPER then read

A MEMOIR OF THE LATE WILLARD PARKER, M.D., LL.D.

The scientific paper of the evening was read by AMBROSE L. RANNEY, M.D., and was entitled

THE THERAPEUTICAL EFFECTS OF THE INTERNAL ADMINISTRATION OF HOT WATER IN THE TREATMENT OF NERVOUS DISEASES.

The author spoke of a mutual dependence existing between disorders of the thoracic, abdominal, and pelvic viscera and some forms of functional disturbance of the nervous system. This remark was prefatory of what should follow.

Hot water is largely used among the laity at the present time as a medicinal agent, and this use had been suggested principally by word of mouth, and not by published matter. The treatment seems first to have been employed by Dr. Salisbury in 1858.

After directing attention to the modes of action of heat, Dr. Ranney said the benefits which resulted from the internal use of hot water must be due, in part at least, to heat. Some of its effects were manifested almost immediately in organs not connected with the digestive apparatus.

The following rules were laid down for the administration of hot water. 1. It should be taken in doses of from one goblet to one and a half. 2. It must be drunk hot, from 110° to 150° Fahr. If necessary, fifteen minutes or more might be consumed in sipping it. 3. It should be taken an hour and a half before each meal, and also at bedtime. The quantity taken daily should be modified according to the effects produced. 4. The temperature of the water should be increased as fast as the patient could bear it. Below 110°

it acted as an emetic. 5. The administration should be continued for at least six months to get the full effects. It would be some weeks, as a rule, before any beneficial effects became markedly apparent. 6. The dose should be determined largely by the specific gravity and general character of the urine. If it fell as low as 1.010 the dose should be reduced to one-half a pint; if it reached 1.030 it should be gradually increased to a pint, provided there was not profuse sweating, with diminished quantity of urine. 7. The use of cold fluids should be absolutely prohibited. 8. A restricted diet was often necessary to the full effects of the treatment in some forms of nervous derangements. With some patients he forbade sweets, fats, and pastry; in others he allowed only a lean-meat diet.

The effects of this treatment were manifest in increased activity of the skin, warmth of the extremities, the circulation became more uniform, and it was believed that the viscera became disengorged; the quantity of the urine was increased; the accessory organs of digestion, the liver and pancreas, were stimulated; the fæces, which at first were dark, became soft and yellow, taking on more the appearance of the fæces of the infant. He had known the treatment to check hæmorrhoidal bleeding and chronic diarrhoea. He believed certain cases of locomotor ataxia had been benefited, but other forms of treatment were continued at the same time. Some cases of diabetes had rebelled against every other form of treatment, including that of diet, but when hot water was added the patients began almost immediately to improve, and in a short time were apparently cured. It had cured three cases of gastralgia with extreme paroxysms. Neurasthenic patients were almost invariably benefited,—those presenting symptoms of cerebral hyperæmia and anæmia, etc.

Dr. Ranney thought the neurotic theory of the action of the hot water the most plausible, and then spoke of the intimate relationship between the several centres of the vasomotor nerves to one another and to the cerebro-spinal system, both as to connection and reaction upon one another. Did not the hot water produce a direct effect upon the solar plexus, which lay just behind the stomach, and by reflex action upon the other system of nerves?

Dr. Ranney believed the chief benefit derived from a visit to the hot-water springs was due to the agency of heat, to a restricted diet, and to enforced physical and mental rest.

DISCUSSION.

Dr. E. C. SEGUIN had not had much experience in the use of hot water, and had never employed it in purely organic affections of the nervous system. He thought there were

several points in the paper which were open to some question. He thought, for instance, that the water did not reach the stomach in a sufficiently hot state to act in the manner suggested by the author. While passing to the stomach it lost some of its heat, just as ice-water imparted some of its cold: there was a tendency to equalization of the temperature of the fluid and the food-passages. Again, many of the disorders spoken of as affections of the nervous system were due to, or at least associated with, disorders of the digestive system, with mal-assimilation, and in these cases the restricted diet of itself would often prove very beneficial. He asked the question if it was not possible that the benefit was due to the water as a fluid, and not to its heat-properties. Many patients had a lack of desire for water, and it had been found that if they could be induced to take more than what their appetites called for they would receive benefit. The theory advanced regarding the action of the agent might have some foundation, but he thought a good share of the benefit produced was to be attributed to the water itself, and but little would be left to attribute to the action of heat. Dr. Seguin then spoke a word in favor of cold water, ice-cream, etc. They did not reach the stomach ice-cold.

Dr. R. W. AMIDON had for some time used hot water in the treatment of nervous phenomena connected with dyspepsia or the gouty and rheumatic diatheses. He agreed with the last speaker, that the action of the hot water as a derivative or counter-irritant was extremely doubtful. He did not believe that when it reached the stomach it was sufficiently hot to produce a counter-irritant effect. He understood the author to say that the beneficial effects of the hot water were obtained only after six months, but Dr. Amidon's experience taught him that counter-irritants acted much sooner than that. He believed the hot water acted more as a diluent; that it increased destructive metamorphosis and the powers of assimilation.

Dr. L. PUTZEL thought the theory concerning the action of hot water taken into the stomach, as advanced by the author of the paper, proved too much, for he had said that the agent had proved of benefit both in cases of cerebral hyperæmia and cerebral anæmia, and Dr. Putzel did not think it could act beneficially in opposite conditions. He would lay some stress upon the point made by Dr. Amidon, that an agent which acts by its irritant effects should produce its results quickly. He should suppose that the best results from the use of hot water would be obtained in the commencement of the treatment, as afterwards the stomach would become habituated to the irritation.

Dr. W. B. BIRDSALL believed that there was a good deal of efficacy in hot water, as well also in cold water, when used as therapeutical

agents. He was not prepared to deny the influence which it had been stated heat played in this mode of treatment. But what he had been most anxious to hear was statistics of a clear character which would enable us to judge of the effects of hot water, particularly in the class of cases which were strictly disorders of the nervous system, as locomotor ataxia. But, unfortunately, the cases related had been submitted to a combination of treatment, and not to that by hot water alone, and we were therefore unable to tell what part had been played by this agent in the production of beneficial results. In the cases of functional disturbance of the nervous system it would be difficult to say how much of the good result was to be attributed to the element of heat and how much to the diluent properties of the agent. He thought the hot water might begin to produce its effects as an agent of heat the moment it came in contact with the mucous membrane in its passage down to the stomach. His impression was that it was not the influence of the heat upon the vaso-motor system alone which caused the results. It might also have produced some influence upon the other system of nerves.

Dr. C. L. DANA had used hot water in cases of nervous disorder associated with gastric disturbances, particularly in hysterical women, but he had not been favorably impressed with its efficacy. The want of favorable results, however, might possibly have been due to lack of carrying out the treatment so persistently as the author recommended. He believed that the paper would result in benefit in suggesting a mode of treatment for a class which usually resisted almost all kinds of treatment, and, as Dr. Wilks had years ago pointed out, those agents which were not directed immediately to the nervous system were more likely to prove efficacious in the treatment of this class of disorders.

Dr. J. L. CORNING had obtained good results from the use of hot water in cases of so-called neurasthenia with concomitant gastric disorders. He had attributed the good effect to the influence produced upon the mucous membrane of the stomach by the hot water. He had obtained good results in from six weeks to two months.

Dr. JOHN SCOTT, of San Francisco, had employed hot water in checking emesis, especially after the administration of ether. He had also given water in the form of a milk diet with great benefit.

Dr. RANNEY, in closing the discussion, said that any one who would take hot water as he had recommended would be convinced after drinking it that it reached the stomach in more than a warm state. Hot water could not lose much of its heat before it reached the stomach. It had been suggested by some of the speakers that the beneficial effects produced by the hot water were due to its diluent qualities, but he had obtained results with

four goblets of hot water a day which could not have been obtained by as many gallons of water in its ordinary state. He had been misunderstood to say that the effects were produced only after the lapse of six months. What he did say was that in some cases it took from five to six weeks to get marked effects, and in some six months to produce the full effects. The theory which he had suggested concerning the action of the agent seemed to have been the chief basis of the discussion and adverse criticism. He had advanced the theory simply as being to him the most plausible, but it might be entirely incorrect, yet the facts as to the result of treatment by the swallowing of hot water existed. As to Dr. Putzel's criticism, that benefit could not be produced in opposite conditions in both cerebral hyperæmia and cerebral anæmia, he would say the agent had a tendency to restore the parts to their normal condition, and in so doing would tend to relieve any abnormal condition which might exist in the brain. One man who drank whiskey would become bloated and fat, while another, taking the same agent, would lose flesh and become thin. It had been doubted whether his cases proved anything, as different agents were employed in the treatment at the same time. But the other measures had failed to produce any benefit until combined with the use of hot water. It followed, therefore, either that the hot water alone had produced beneficial result, or that hot water combined with other remedies had done so.

Dr. T. H. BURCHARD asked Dr. Ranney whether he had observed any permanent disturbance of the digestive system produced by the hot water when used for some time, and also whether he had observed that it caused a tendency to internal hemorrhages. He had seen many patients at Saratoga Springs, who had been treated by this method, and, after five or six months, had experienced disturbance of digestion, had lost flesh, and become greatly reduced in health; and others had shown a tendency to gastric and intestinal hemorrhage.

Dr. RANNEY replied that he had never known intestinal hemorrhage to occur in a patient to whom he had administered hot water, and he had treated a great many patients in this manner. Nor had he known it to produce permanent disorder of the digestive powers. He had known patients to rapidly lose weight, but it was due to the restricted diet which had been purposely recommended, and they would quickly regain their weight on returning to a general diet.

A NEW ANÆSTHETIC.

Dr. C. R. AGNEW made some remarks upon hydrochlorate of cocaine as an anæsthetic when applied to the conjunctiva. Since attention had been called to the subject by a letter published in the *New York Medical*

Record, October 11, he had employed the agent in a number of cases in which he had performed operations upon the eye, and both he and the observers had been greatly satisfied and astonished with the beauty of its action. He felt that nothing of greater value had been given to surgery since the discovery of ether and chloroform. He distinctly disclaimed any priority in its use in this city. The action of the agent was demonstrated upon two gentlemen present at the meeting. It had not been positively determined whether the agent was capable of producing local anæsthesia in wounds of the skin.

Dr. BURCHARD said it had produced anæsthesia in the finger, the seat of a felon, so that he had been enabled to open the felon without pain to the patient.

Dr. BIRDSALL had been in the habit, the past two years, of employing erythroxylon coca to produce a benumbing effect upon the mucous membrane of the air-passages.

The PRESIDENT referred to the effects of the fluid extract in clearing the voice.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held October 22, 1884, GEORGE F. SHRADY, M.D., President, in the chair.

GENERAL CARCINOMA.

Dr. JOHN A. WYETH presented a specimen with the following history. A German, 38 years of age, was admitted to the Mount Sinai Hospital, September 10. In May last he noticed a tumor to the left of the umbilicus, which grew until, by its size and position, it gave him much inconvenience. On admission, the tumor involved the umbilical, left inguinal, and lumbar regions, extending downward to the symphysis pubis. The patient had lost eighty pounds in weight during the last four months. Pressure over the tumor, under the liver, over the left kidney, and also over the thorax on the left side, gave rise to pain. There was some bulging at the upper part of the left side of the chest, the outline of the clavicle being entirely obliterated. The left axillary and supra-clavicular glands were enlarged. There was marked dullness, diminished voice and breathing; crepitant, subcrepitant, and sonorous râles at the left apex anteriorly; also marked laryngitis, loss of voice, and spasmodic cough. The patient suffered constantly from pain. On the 16th of September the patient felt great pain in the left leg and thigh, the limb became cold and mottled in color, the foot anæsthetic; there was no pulsation in the femoral artery. Swelling of the limb increased, accompanied with pain in the course of the femoral artery, and several blebs developed near the ankle. The patient died on the 15th of October, of signs of pulmonary œdema. At the autopsy a large carcinoma was

found occupying the left inguinal and lumbar regions, covered by the mesentery and attached to the vertebral column, also to the descending colon and left kidney. Hydro-nephrosis had resulted from compression of the ureter. The tumor seemed to arise from the lower dorsal and lumbar glands, and surrounded the aorta and vena cava. The left external iliac artery was flattened, and there was thrombosis of the vein extending down into the femoral. The anterior mediastinum was occupied by a new growth attached to the sternum, extending backward, surrounding the trachea and great vessels of the neck. The apex of the left lung was pushed to the left by the tumor. The liver and bladder were the seat of broken-down white foci.

An interesting point in the history of the case was the fact that in April last Dr. Gerster removed the left testicle, which he presented to the Society as a specimen of tubercle testis.

INHALATION OF A BLOW-GUN DART—SPONTANEOUS EXPULSION AFTER TRACHEOTOMY.

Dr. WYETH presented a blow-gun dart, consisting of a pin with a cotton wad attached, which had been swallowed by a boy 10 years of age on the 7th of September. Violent cough followed immediately after the dart was inspired, and the mother thought the boy would choke to death, but the symptoms of suffocation disappeared shortly, not to return again until the foreign body was coughed up. The patient was carefully examined by the family physician, who concluded the dart had reached the right bronchus, and when he was brought to New York, Dr. Wyeth, Dr. Elsberg, and Dr. Leaming were of the opinion that the foreign body was in the right bronchus, and consequently, on the 11th of September, Dr. Wyeth performed tracheotomy and searched for the body. He first introduced the little finger, and afterwards used a pair of forceps, opening them a quarter of an inch and pushing them forward a quarter of an inch in different directions, closing them, but failed to touch what seemed to be the object sought for. A piece of ordinary surgeon's wire, doubled, was also passed, but in vain. The wound was kept open until the 24th of September, the patient doing well, when another consultation was held with Drs. A. Jacobi, E. G. Janeway, and J. H. Ripley. Dr. Ripley thought the dart had become loosened, was coughed part of the way up, and fell again with the next inspiration into the left bronchus. The next day Dr. Wyeth enlarged the tracheal wound to insert a silver tube. The wound being open, he introduced the finger into the left bronchus to see if it might not be possible the dart had changed its position. This procedure, which was repeated twice, gave rise each time to violent expiratory efforts, which finally resulted in throwing the pin, with the wad attached, out of the mouth. The patient had

not been fully under the influence of the anæsthetic; hence the irritative effects produced by inserting the finger into the bronchus. Dr. Wyeth was having an instrument made by which he hoped to be able, in cases of this character, to remove the foreign body by suction-force through a tube introduced into the trachea.

The PRESIDENT thought that, as a rule, foreign bodies were expelled from the air-passages by a violent expiratory effort, and it might be well, in cases in which the bodies were of a round form, to wait for them to be raised spontaneously. In cases like the one related by Dr. Wyeth, in which it was evident the point of a sharp body was upward, it would be safer to explore the trachea and bronchi. He once removed a spiral spring of a clothes-pin from the top of the larynx in a boy about five years of age, who was about to suffocate, using his finger as an instrument of extraction.

Dr. H. C. COE referred to the case of a young man who suffered from symptoms of consumption after swallowing a head of timothy. The foreign body was coughed up after about a year, and the patient completely recovered.

Dr. J. LEWIS SMITH referred to the case of a child which had fibroid pneumonia the result of inhaling a piece of hickory-nut-shell. Recovery took place after spontaneous removal of the nut-shell, at the end of three months from the time of its inhalation.

Dr. FURMAN knew a patient to recover from lung-symptoms after coughing up a piece of tooth which had been inhaled while he was under the influence of an anæsthetic.

TUMOR OF THE BREAST.

Dr. W. P. NORTHRUP presented a tumor of the breast which Dr. C. C. Lee had removed, at the Foundling Asylum, from a woman 45 years of age, the mother of ten children. The tumor began to develop just before the birth of her last child, and when removed, seven weeks after the birth of the child, was as large as an orange. The case had been seen by five or six eminent surgeons of the city, all of whom pronounced it one of malignant disease and recommended immediate removal of the breast. The tumor was nodular and hard to the touch; the nipple was retracted; there were a few enlarged glands in the axilla. When Dr. Lee cut into the tumor there spurted forth fetid matter to some distance, so tense were the cyst-walls, and all present thought he had cut into an abscess. He then removed the ragged walls, the tissue on the posterior wall being very hard; the anterior wall was quite thin. He did not remove the axillary glands. The prognosis was considered doubtful. The microscopical examination left some doubt as to the exact nature of the tumor, but Dr. Northrup and Dr. Delafield were inclined to think that

originally it was an adenoma, an abscess developing in its centre later. There were numerous giant cells in the specimen. The wound healed almost entirely by first intention. The axillary glands had diminished in size since the operation.

Dr. WYETH was disposed to regard the giant cells as an indication of sarcoma or of tubercle.

The PRESIDENT said the description of the case, as given by Dr. Northrup, corresponded almost exactly to that of a case in which he operated two years ago, removing a tumor from the breast and enlarged glands from the axilla. The cyst-walls in his case were also very tense. At that time he thought the prognosis good, but malignant disease had developed in the glands of the neck, and two operations were subsequently performed, and now the patient was dying of gradual suffocation and asthenia. He thought it would have been proper to remove the enlarged glands in the axilla in Dr. Northrup's case. He should regard the prognosis as very unfavorable.

ULCERATIVE ENDOCARDITIS.

Dr. J. LEWIS SMITH related the history of a case of ulcerative endocarditis, as follows: The patient was a girl 5 years of age, who two years before had had double lobar pneumonia, and two months before had had pertussis, but her health immediately before the fatal disease was good. She began to be sick on the 16th of August, with fever and loss of appetite. Pneumonia was suspected, but definite signs did not exist. Dr. Smith saw the patient nine days later, at which time he was unable to make a clear diagnosis. There were no physical signs of pneumonia; the heart-sounds and the urine were normal; the temperature in the groin was 104.5°, the pulse 150, the tongue dry and furred, respiration a little accelerated. That night, the 25th of September, the patient slept well and had two stools of the natural appearance; the pulse 160, the temperature in the groin 102.4°. On the evening of the 26th the patient had a copious evacuation of very dark blood. On the 27th the pulse 160; there had been one normal evacuation from the bowel. On this day the patient began to vomit, and continued to vomit nearly every day until death, the temperature varying morning and night from 101° to 105°. On the 4th of October the patient vomited blood. She died on the 5th, in a state of great prostration. There was some extravasation of blood under the skin on the last day of life. At the autopsy the mucous membrane of the stomach and intestines was mottled with extravasation of blood. There were some points of extravasated blood in the lungs and liver. In the anterior, and more or less in the posterior, lobes of the brain were extravasations, in some places filling the sulci. On the mitral

valve was a polypus a quarter of an inch in length, and two other polypi were found on the heart-walls, covered with fibrin. The entire endocardium seemed to be much thickened. The polypi contained numberless micrococci.

Dr. H. C. COE referred to two cases of tumor of the abdomen, one having been diagnosed as an ovarian tumor and the other as a cyst of the kidney. Examination of the blood showed that the patients were suffering from leucocythæmia, and they were thus saved the perils of an unnecessary abdominal operation.

PHILADELPHIA CLINICAL SOCIETY.

STATED MEETING, SEPTEMBER 26, 1884.

DR. CLARA MARSHALL read a "Report of Two Cases of Imperforate Anus, with Recto-Vaginal Fistulæ, in the Adult." The paper was reserved for publication by the reader.

A case of *Atresia Vagina with Retention of Menses* was reported by Dr. E. E. MONTGOMERY. Miss F., æt. 44, single, of healthy parentage, was brought to my office July 5, 1884, by Dr. Sibbald, of this State, with the following history. She commenced menstruating at sixteen, and continued without disturbance until her thirtieth year. Two years previously she had fallen upon a curbstone, receiving quite serious spinal injury, which lasted a year, when she fully recovered. The menstrual periods, which were always regular, lasting from three to four days, normal in quantity and color, at thirty became painful. Since then the pain has been constant and increasing with each period. The discharge now lasts from seven to ten days, is of a dark bloody nature and offensive odor. During the menstrual intervals there is a continuous discharge of "corruption," as she calls it, necessitating the constant wearing of a napkin and producing excoriation. All of these symptoms have been increasing during the past eight years, and she has been compelled to discontinue work a week or more at a time. She complains of a sensation of weight or pressure in the pelvis, attended with severe pain during defecation. There is no pain during micturition. Her nervous system has become much affected.

Upon examination, the vagina was found relaxed and the external parts red and bathed with secretion. The vagina was about two inches long, ending above in a lateral cicatrix. No uterus could be felt. Upon withdrawal, the finger was found bathed with a dark, thick, highly offensive discharge. The use of a Sims speculum disclosed a cicatricial line running from side to side across the fundus of the sulcus, just posterior to which the membrane looked thinner. Slight press-

ure against this with a sound perforated it, and was followed by a profuse discharge of broken-down blood and pus. A pair of Ellinger's dilators was then introduced and spread to their full extent; over four ounces of the fluid flowed out. The cavity was then washed out with a carbolized solution. In this cavity, above the cicatrix, the uterus was found retroverted and firmly fixed, forming the roof. The cavity was dressed with carbolized glycerin on cotton. Subsequent treatment was conducted by Dr. Sibbald. He informs me that there has been no difficulty since, and that she now feels perfectly well.

Dr. W. H. PARISH: That the treatment adapted in this case was proper, the results showed, though it was not in accordance with the treatment directed by the text-books. We are there told to puncture the cavity with a trocar, and draw off the confined liquid drop by drop. This is undoubtedly wrong, and its disadvantages have been demonstrated in my own practice. The crucial incision is undoubtedly best.

Dr. COLLINS related the details of a case treated in the manner of the text-books by exploratory needle, trocar, and drop-by-drop drainage. The cartilaginous membrane acting as septum was one and a half inches from the vulva, and probably congenital. A crucial incision was made after drainage, and the corners cut off, and no further trouble was experienced by the patient.

Dr. MONTGOMERY, in closing the discussion, said, "As Dr. Parish has said, the free incision is best, though it was precipitated in the case related by an opening occurring during examination. The danger of septicaemia is certainly increased by a small opening. A particular point of interest in this case was the lateness in life and the time that elapsed between the injury and the retention."

G. BETTON MASSEY, M.D.,
Reporting Secretary.

REVIEWS AND BOOK NOTICES.

OSTEOTOMY AND OSTEOCLASIS FOR DEFORMITIES OF THE LOWER EXTREMITIES. By CHARLES T. POORE, M.D., Surgeon to St. Mary's Free Hospital for Children, New York; Member of the New York Surgical Society, etc. D. Appleton & Co., New York, 1884, pp. 187.

Dr. Poore has written a valuable history of osteotomy and osteoclasia, the methods of their performance and the diseases for which they are required. He has carefully, though by no means arbitrarily, determined the form of operation best adapted to each variety of deformity, and has succeeded in conveying these distinctions to the reader.

Rickets, the cause of most of these de-

formities, the author does not regard as an inherited vice of constitution, but as a general disease of the individual produced by malnutrition; and he claims that "bad air, improper food, and scanty clothing may make the healthiest child the victim of this disease."

He has found most of these deformities produced at the periods of rapid growth, before the seventh or between the twelfth and twentieth years, when the production of cartilage is more rapid than that of the earthy salts. The actual distortion he regards as entirely due to the weight of the body, and not to muscular contraction.

The author's views on one of the great questions of the day (if it can still be regarded as a question) are worth quoting:

"It has only been since the methods of treatment of wounds advocated by Mr. Lister that surgeons have felt justified in operating upon tissues with which their predecessors considered it too hazardous to interfere. Although much of the strict technique of Listerism has been abandoned, yet its fundamental principles have stood the test of time,—viz., cleanliness, drainage, and rest.

"In regard to the use of Listerism, I am clearly of the opinion that it affords no additional safety, and I have long since abandoned its use. I do not place my instruments in any antiseptic solution before using, and I do not regard it as essential to keep the wound damp with carbolized water."

He quotes Macewen, however, as dressing his wounds with iodoform and washing them out with carbolic acid.

After the above statement, one naturally turns to the table of results. We find that he has performed 91 osteotomies, of which 15, or over 16 per cent., suppurated, while of 1510 osteotomies collected from all sources, 109, or about 7 per cent., suppurated.

Dr. Poore prefers the osteotome to either Adams's saw or Shradys's modification, as it is less difficult to work, takes less time, and lacerates the soft tissues less.

After operation the limbs are at once straightened and put in plaster of Paris, to remain until bony union has taken place. He expects primary union of the wound, but observes it through a fenestra, as he does not rely upon the thermometer to indicate the presence of pus.

He considers it very unwise to correct deformities or to attempt to regain motion after suppurative coxalgia, and pronounces it very dangerous under any circumstances.

He found that out of 167 sections for coxalgia many suppurated, and 17 died. He prefers the long splint to permanent plaster dressings in sections about the hip.

The author treats his cases of genu valgum with splints or braces, if they reach him before hardening of the bone has occurred. This he determines by grasping the tibia

firmly at each extremity and trying to "spring" it. If it bends under these circumstances, he uses braces; if no improvement follows in a few months, he operates.

The mechanical treatment is not, however, very successful. He quotes one hospital service, where the patients are particularly well cared for, with only 23 per cent. of cures.

Ogston's operation seems to the author to be dangerous on theoretical grounds. Reeve's is difficult to perform, and it is occasionally impossible to slide the condyle up. Nor does he regard favorably Barwell's method of dividing femur, tibia, and fibula.

The author regards division just above the epiphysis as applicable to all cases of knock-knee dependent upon femoral changes. He gives a full description of all the operations, but considers that "Macewen's operation has superseded all others. It is easier to perform, is applicable to all cases, it is distant from the joint and its ligaments, and is near, if not at, the point of abnormal deviation."

He has modified Macewen's operation by omitting Listerism, flexing the leg instead of extending it, and differs in the method of treating the wound.

Of 622 cases of Macewen's operation there had been but three fatal cases, and in but one was the death due to the operation.

For genu varum the author advises osteotomy at the point of greatest curvature.

Dr. Poore fully reviews the history of osteotomy for angular ankylosis at the knee-joint from John Rhea Barton to the present time. He regards Buck's method, that of excising the entire joint by a cuneiform osteotomy, leaving a small portion of bone to protect the vessels, as the safest and best operation.

We have seen it necessary, when this operation has been performed, not only to excise the entire diameter of the bone, but to remove several further sections from either the femur or tibia, to straighten the limb, owing to the adapted shortening of the tissues posterior to the joint. This made the limb so much shorter as to convince us of the superiority of a section above, in Macewen's line.

In his cuneiform osteotomies for angular deformities of the tibia, the author makes a primary counter-opening posteriorly, keeping carbolized horse-hair in it for at least two days. Osteoclasis is now but seldom used except to correct deformities after fracture. In fifty-three refractures of the femur and twenty-four of the leg the results are reported as perfect.

The author prefers Rizzoli's osteoclast. With this instrument, he states, the point of fracture is entirely under the control of the surgeon, and is sharply transverse.

The author has performed seventy-four linear and seventeen cuneiform osteotomies. The deformity was corrected in all except two. Suppuration occurred in eight of the

linear and seven of the cuneiform. There were no deaths directly from the operation.

He has performed osteoclasis thirty-four times, with perfect recovery in all.

He has collected 1510 cases of osteotomy: 1448 were linear and 62 cuneiform. Of the former 15 died, in 92 suppuration occurred, and in 17 there was some necrosis. Of the cuneiform osteotomies, 17 supplicated and 5 died.

The book is a most welcome and valuable contribution to surgery.

J. M. B.

A MANUAL OF DISEASES OF THE THROAT AND NARES. By MORELL MACKENZIE, M.D. Lond. Vol. II.—Diseases of the Oesophagus, Nose, and Naso-Pharynx. 8vo, pp. 400, 93 Illustrations. American Edition. William Wood & Co., New York, 1884.

The book before us is the long-expected second volume of Dr. Mackenzie's comprehensive work on diseases of the throat and nose, which was to follow closely upon the appearance of the first volume, but was delayed until now by peculiar circumstances.

As the English edition has already received notice in these pages, we need not again refer to the systematic arrangement and lucid explanations which give this work special value for reference. We may observe, however, that the views expressed in regard to the pathology and treatment of nasal diseases are in some instances different from those held by most of the leading laryngologists of America, and it will be found that some of the later, but not unimportant, achievements attained by Americans are not mentioned, as, for instance, the treatment of hay-fever by the galvano-cautery, and the existence of cystic polypi in the nares, as reported by Leferts and Seiler. We can, however, fully endorse the author when, in speaking of the treatment of nasal obstruction, he says, "To cut through everything soft, to saw through everything hard, and to tie everything that bleeds,—the spirit of this simple instruction in surgery has, I fear, in recent years sometimes influenced the young practitioner, and the nasal passages have occasionally been 'cleared' with a zeal and energy worthy of the industrious backwoodsman." More interesting than useful perhaps for the general practitioner are the chapters on rhinoliths, maggots, and insects in the nares, which accidents are so rarely met with, and then only in certain parts of the world, that their description has only been added for the sake of completeness. One of the great charms of the volume is the elegant and easy language in which it is clothed, making its perusal a pleasure rather than a labor. The wood-cuts illustrating the text are well executed, and add greatly to the appearance as well as to the value of the book,

and the general appearance is such as to do credit to the well-known publishing firm.

C. S.

INDEX-CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, U.S.A. Authors and Subjects. Vol. V., Flaccus-Hearth. Government Printing-Office, Washington, 1884.

In announcing the fifth volume of the Index-Catalogue we can only express our congratulations to Dr. Billings upon the continued progress of this great work, which is an honor to America and American physicians. This issue contains more than 15,000 author-titles, representing 5755 volumes and 12,896 pamphlets; it also includes 8069 subject-titles of separate books and pamphlets and 34,027 titles of articles in periodicals. The greatest number of references appear appropriately under the Head and the Heart, the latter comprising no less than a hundred pages.

Such a list of references is very discouraging to authorship, and is well calculated to sprinkle thorns in the path of the painstaking essayist.

MEDICAL RHYMES, ETC. Selected and Compiled from a Variety of Sources. By HUGO ERICHSEN, M.D. With an Introduction by Prof. WILLIS P. KING, M.D. Illustrated. J. H. Chambers & Co., St. Louis. Cloth, 8vo, pp. 220.

In this collection of medical rhymes, wise and otherwise, there are some old friends and many recent aspirants for favor. The "Lines to a Skeleton" and the "Address to a Mummy," with Dr. Holmes's "Stethoscope Song" and Weir Mitchell's "Lines to a Deserted Study," are found in association with medical ditties, humorous or pathetic, and of varying interest and value. It is a book that will afford a pleasant half-hour to the traditional overworked doctor who comes home wearied with the drudgery of his daily round of practice.

A SHORT TEXT-BOOK OF INORGANIC CHEMISTRY. By DR. HERMANN KOLBE, Professor of Chemistry in the University of Leipsic. Translated and edited by T. S. HUMPIDGE, Ph.D., B.Sc. New York, John Wiley & Sons. 8vo. \$2.50.

English readers will welcome this translation of the elementary text-book of one of Germany's foremost chemists, representing as it does the course of instruction followed in many of the German schools. The descriptive portions of the work are full and excellent, but the theoretical portions are not always as clear as could be desired, and are in some cases not strictly in accord with facts. "A salt is the substance produced by the union of a base with an acid" is a definition leaning rather to the old dual hypothesis than to an interpretation of the actual phenomenon oc-

curing in the formation of a salt, and gives no idea as to the structure of salts. "Halogen bodies" and "haloid salts" are terms which would better disappear from chemistry than be perpetuated in standard text-books. Is it true that "the atom of oxygen possesses two points of attraction," while the atom of hydrogen possesses but one?

This book will prove of value to the student of chemistry, and as a small work of reference; to the general student, and especially for medical students, it is too full and laborious, although the reading is by no means difficult.

The illustrations, press-work, and binding are highly commendable. G.

GLEANINGS FROM EXCHANGES.

MICROCOCCHI IN RELATION TO WOUNDS, ABSCESSSES, AND SEPTIC PROCESSES.—In a report to the Scientific Grants Committee of the British Medical Association, Dr. W. Watson Cheyne gives the details of some important experiments, the results of which he summarizes as follows:

"1. There are various kinds of micrococci found in wounds treated aseptically, differing markedly from each other in their effects on animals. They agree in growing best at the temperature of the body, and in causing acidity and sweaty smell in the fluids in which they grow. The experiments show that cultivations may be carried on in fluids with accuracy, provided the precautions mentioned be observed.

"2. The micrococci tested in these experiments grew best in materials exposed to oxygen gas. They grew only with difficulty in the absence of oxygen. Eggs were not good pabulum.

"3. Their effect on animals was not altered by growth with or without oxygen.

"4. The effects of these micrococci on rabbits and man were not similar, some of the most virulent forms for rabbits causing no deleterious effect in wounds in man.

"5. The kidney is apparently an important excreting organ for organisms.

"6. Organisms not capable of growing in the blood may yet cause serious effects by growing in the excretory canals. This may explain some cases of pyelitis.

"7. Where an organism is not markedly pathogenic, it may be necessary to introduce a large quantity before morbid changes are set up.

"8. Suppuration is not always due to micrococci; it may be caused by chemical irritants, such as croton-oil.

"9. Micrococci are always present in acute abscesses, and are probably the cause of them.

"10. In some cases, the micrococci are the

primary cause of the inflammation and suppuration, as in pyæmic abscesses; generally, however, they begin to act after inflammation has been previously induced.

"11. This inflammation may be caused by an injury, by the absorption of chemically irritating substances from wounds, by cold, etc.

"12. There are several different kinds of micrococci associated with suppuration.

"13. Micrococci cause suppuration by the production of a chemically irritating substance, which, if applied to the tissues in a concentrated form, causes necrosis of the tissue, but, if more dilute, causes inflammation and suppuration.

"14. The conditions in wounds and abscesses are not the same, inasmuch as in the former there is opportunity for mechanical and chemical irritants to work.

"15. There is no reason for denying the existence of 'antiseptic suppuration.'

"16. Tension may also cause suppuration, but it is perhaps most frequently aided by the growth of micrococci. These organisms need not be of a very virulent kind. It is also probable that the products of inflammation are themselves irritating and capable of exciting or keeping up inflammation.

"17. The micro-organisms of septicæmia, of pyæmia, and of erysipelas, are different from one another and from those of abscesses. In erysipelas, the micrococci grow in the lymphatic spaces. In pyæmia, they grow in the blood to form colonies and emboli. In septicæmia, they may only grow locally, the symptoms being due to the absorption of their ptomaines; or if they grow in the blood they do not form colonies and emboli. Septicæmia may also be due to other organisms besides micrococci.

"18. There are no facts to support the view that it is the same micrococcus which, under different conditions, causes these various diseases. The experiments of conversion of innocent into malignant forms, and *vice versa*, are 'unreliable.'—*British Medical Journal*, October 4.

THE CAUSE OF CHOLERA.—A member of the Marseilles Cholera Commission has furnished the following summary of its conclusions thus far:

"1. The cholera is transmissible to the rabbit, as demonstrated by injection into the veins of the blood of a cholera-patient at the algid period. The rabbit died in twenty-four hours, with lesions entirely like those of cholera. 2. By cultivation, this blood after a few hours loses its infectious properties. 3. Injections of choleraic blood in the period of reaction, or a very advanced algid period, produce no effect. 4. The perspiration of a cholera-patient, injected into the veins, does not transmit cholera. 5. The stomachic or intestinal dejections, or the gastro-intestinal

contents (the last full of comma-bacilli), may, after filtration, be injected with impunity into the cellular tissue of the peritoneum, the windpipe, the intestines, the rectum, and even into the blood. 6. Comma-bacilli taken from the intestines of a cholera-patient may be introduced into the intestines of a rabbit, and multiply there for more than eleven days, without producing any choleraic symptoms, and without necropsy revealing the anatomopathological lesions characteristic of cholera. 7. There is thus every proof of the non-specificity of the comma-bacillus. We experimented on bacilli taken from the intestine, and with dejections kept from two to twelve days, the results being always negative. Everything also proves that this bacillus does not produce in the intestine toxic ptomaines which would be the cause of poisoning,—namely, the lesion of the blood. The inference from more than fifty of these experiments is the non-contagiousness of cholera, which we maintained from the very opening of the discussions. 8. The minute examination made by us of the heart and large venous vessels of cholera patients enables us to affirm that there is no phlebotendinitis in cholera, as alleged by Morgagni, and still maintained by many enlightened physicians. 9. Bulbar and medullary lesions, or those of the solar plexus, appear to us to be all secondary lesions. 10. In our opinion, the initial lesion of cholera takes place in the blood. 11. It essentially consists in the softening of the hæmoglobin, which makes some corpuscles lose first their clear shape, the fixity of their form, and the faculty of being indented. These corpuscles adhere together, lengthen out, stick together, and, in very rapid cases especially, some are seen which are quite abnormal, while others appear quite healthy. 12. The entire loss of elasticity of the corpuscle (which is shown by the preservation of the elliptic form when it has been stretched out) is, in our view, a certain sign of the patient's death. To stretch out a corpuscle, it is merely needful to alter the inclination of a plate on which a sanguineous current has been established in the field of the microscope. The fluid column stops at one point, whereas the rest continues to flow. An elongation of the intermediary corpuscles results, and then a rupture of the column. In the gap thus formed are some scattered corpuscles. If these revert to their primitive form, the patient may recover. If they keep the elliptic form, we have seen death follow in every case, even if the patient's symptoms were not serious at the time of the examination of the blood. At the outset, and in the rapid cases, which give the clearest results, corpuscles remaining healthy are seen alongside the unhealthy ones, and assume the shape well known in heaps of money, or maintain their liberty. When currents are created in the field of observation, the columns of healthy,

or less unhealthy, corpuscles remain stationary, or nearly so; whereas the unhealthy corpuscles flow between the columns or the stationary masses like fluid lava. This we believe to be the characteristic lesion of cholera. By hourly examination of the blood of cholera-patients the progress of the malady can be mathematically followed. First some corpuscles are unhealthy, then one-third, then half, then two-thirds, and lastly death supervenes. A very important fact in our view is that all the corpuscles are not simultaneously affected. We debar ourselves from substituting a fresh hypothesis for all those we have overthrown. We confine ourselves to saying that we know better than our predecessors what the cholera is not, but we do not know what it is."

TREATMENT OF LUPUS BY PYROGALLIC ACID AND MERCURIAL PLASTER.—Dr. Schwimmer reports (*Wiener Med. Wochenschrift*) that after trial of the various methods of treatment upon lupus patients, he has found none which, *when employed singly*, can be pronounced suited to every case. Severe local measures are capable in certain cases of doing more harm than good. Among the most useful means of treatment must be reckoned pyrogallie acid. Applied in the form of an ointment (10 to 15 per cent.) three or four times daily, it soon transforms the morbid growth into a pulpy, grayish substance. Although the cicatrix looks clean after this treatment, it almost always contains tubercles, which in many cases renew the disease. To prevent this result he hit upon mercurial plaster, which he employed in conjunction with the former. The pyrogallie acid is seldom able to produce the total destruction of the lupus tissue alone, and it is well known that the gray plaster has little influence upon the lupoid infiltration by itself; but by using the acid to destroy the lupus tissue, and the plaster afterwards to promote absorption, they act very efficiently. In a series of very malignant cases he pursued with success the following course:

For several days after admission the diseased surfaces were kept completely covered with vaseline smeared on cloths, in order to facilitate the removal of all secondary morbid products, such as scabs, etc. A ten-per-cent. pyrogallie ointment was then applied over the same area, and renewed two or three times in the twenty-four hours. This dressing was employed from four to six days, or, in cases where the cutaneous tissues were insensitive, for six or seven days. On its removal, vaseline was again applied for one day, after which the entire suppurating surface was covered with mercurial plaster. Healing began in from ten days to a fortnight in most localities, but isolated nodes and tubercles could still be detected in the cicatrized integument. Pyrogallie acid was now once more applied for three

or four days, causing renewed suppuration of the partly-healed infiltrations, while those more firmly skinned over remained unaffected. When treatment was repeated, so much pain in many cases was experienced on the second day that mercurial plaster had to be at once substituted for the ointment; but if this was not the case, the latter was left on for two days longer. The gray plaster was allowed to remain—being changed once daily if the suppuration was trifling, twice or thrice if it was more profuse—until cicatrization was complete, which sometimes required four weeks. When the complaint was peculiarly indolent and obstinate, the same process was gone over for a third time, but treatment never extended further than this.

An accurate and unprejudiced comparison of the results obtained in this way, with those following other methods, has proved decidedly favorable to the former. A speedier and much better resolution of the most advanced and wide-spreading morbid growths was found to occur under the combined pyrogallie and mercurial treatment, than could have been brought about by the united agencies of scarification and the thermo-cautery.

In conclusion, he states that, in order "to make our estimate more precise, and to obviate any misconception which might cause the means I have recommended to be regarded in the light of a *lupus-panacea*, I present the following summary of the objects which they may reasonably be expected to accomplish:

"1. The severest and most extensive forms of lupus—those hitherto most difficult and frequently impossible of management—may often be essentially ameliorated by these simple and comparatively painless procedures.

"2. The application of mercurial plaster, immediately after several days' use of pyrogallie acid, is able to bring about complete absorption of the tubercles and infiltrated cells at some points, while at others it is remarkably effective in arresting the morbid growth and forming complete and smooth cicatrices, results which are not attained by the use of either remedy alone. The combined treatment may be employed two or three times in succession without any inconvenient consequences.

"3. The more circumscribed forms of lupus are *less* amenable to this method than the diffuse, serpiginous, and ulcerated varieties,—perhaps for the reason that in the latter the corium affords a less congenial breeding-place for the morbid cells. Yet sometimes, in these same cases, better results are obtained through a previous deep scarification of the affected parts, although scarification alone will prove entirely ineffectual.

"4. The duration of treatment is shorter than under the other methods, not exceeding three or four months in the worst cases.

"5. Relapses are to be looked for here no less than after other processes, but are least to be apprehended when the treatment has been thoroughly carried out,—i.e., has terminated in uniform and complete cicatrization.

"6. This method is indicated in the most extended forms of lupus, whether occurring on the face, the body, or the extremities, and is especially suitable in neglected cases which have received no previous treatment.

"7. The affected surfaces, after healing, retain their redness for a considerable period. The discoloration gradually fades, however, and its disappearance can sometimes be hastened by using an ointment of bismuth or zinc."—*Glasgow Medical Journal*, October.

ARE HARMLESS MICRO-ORGANISMS EVER CONVERTED INTO DISEASE-GERMS?—In Dr. Klein's report to the medical officer of the Local Government Board, this distinguished and skilful investigator discusses the theory of the attenuation of virus, and that which has been advanced of late, whether or not a pathogenic organism can be developed from a non-pathogenic one. Buchner having declared that the bacillus of hay-infusion could be converted into that of anthracæmia, Dr. Klein demonstrates the fallacy of this, and shows how the mistake was probably committed. The statement that the jequirity bacillus is a derivative of an ordinary bacillus has been disproved by a number of other experimenters besides Dr. Klein, and the other view, that ordinary mould fungus when cultivated at high temperatures and in alkaline media can be converted into pathogenic material, has also been denied by Gaffky, Koch, and Leber. The spores which flourish under such circumstances are not spores of common mould, but of certain species of aspergillus, which is known to possess pathogenic qualities. With regard to the theory of attenuation, Dr. Klein does not agree with M. Pasteur in his statement that a culture of bacillus anthracis which has become inactive for sheep will yield further cultivations of the same character. Klein, on the contrary, declares that such cultures, under favorable circumstances for development, always regain full virulence. Dr. Klein attributes the diminished virulence to some collateral product which exercises an inhibitory effect upon the development of the organisms: when fresh culture-fluids are inoculated with these enfeebled cultivations, however, these new fluids at once attain full virulence. The substances which exercise an inhibitory influence are supposed to be analogous to the aromatic bodies which come into existence during the course of ordinary putrefaction. The question of the relation of micro-organisms to each other, as well as to diseased conditions, is yet, to a great extent, in a confused condition for the want of more knowledge of

the natural history of micro-organisms. In these reports Dr. Klein has contributed the fruits of much laborious investigation to elucidate the subject.—*British Medical Journal*, October 11.

THE QUESTION OF HOME STUDY BY SCHOOL-CHILDREN.—An English court has recently decided that there can be too much study on the part of scholars, under this state of facts: A teacher had prescribed certain lessons which would have to be learned at home, and when the scholar had failed to commit them to memory he inflicted punishment, the character of which is not stated, but which gave rise to a charge of assault and battery against the teacher. The case came before two courts for judgment, and both of them decided that "home lessons set by teachers cannot be enforced." The question of the propriety of giving lessons which must be studied at home, especially in the case of young and growing children, has been very often considered by writers on health subjects, but the legal aspects of the case have not been brought up frequently, and, so far as is known, not at all in this country. The question, if it arose at all here, would come up in connection with the public schools, as there would be no jurisdiction over private schools in this regard. Should it be settled as the law that lessons must not be given requiring home study, it would necessitate having ample time for study during school hours in addition to recitation hours, and it may be a question whether this lengthening of school hours would not be as injurious to health as study at home.

BULLET-WOUND OF THE BRAIN, WITH RECOVERY.—The inhabitants of Uruguay, from their out-door life and exemption from the debilitating influences of high-pressure civilization, possess wonderful recuperative power when injured. Dr. H. Parsons reports a case of a girl, thirteen years of age, who was shot by a playmate with a small-calibre revolver; the bullet entered the mastoid process of the right temporal bone, and took a course inward with a slight downward direction. A probe was introduced six inches into the wound, when it impinged upon a hard substance, which might have been either the ball or the opposite side of the skull. The patient fell as soon as she was shot, but recovered consciousness within an hour, when there was internal strabismus of the left eye and complete loss of power over the left arm and leg, but without being accompanied by loss of sensation. There was considerable hemorrhage from the site of the injury, which was situated just behind the right ear. The wound was dressed with iodoform, cotton wool, and cold compresses. A few doses of bromide of potassium were given internally. The dressing was removed in a few days, when the wound was found to be healed, without any pus or surrounding inflamma-

tion. She was out of bed in a week, and in a month had regained the use of her left leg, and a few weeks later of the left arm. She is now, eighteen months after the accident, apparently perfectly well.—*British Medical Journal*, October 18.

PRACTICAL HYGIENE.—Dr. Louis W. Atlee contributes a timely article to the October issue of the *Journal of the Franklin Institute* upon "Our Clothing and Our Houses," in which the wardrobe and tenement are submitted to critical examination, and some popular errors and defects condemned. Clothing should protect from the weather and retard heat-radiation from the body without too greatly interfering with the excretory functions of the skin or depriving the body of access to the fresh air. Houses should likewise aid in maintaining the normal temperature, furnish protection from storms, and yet not deprive the organism of oxygen. Dampness is a fruitful source of sickness, and when filth and overcrowding occur under certain conditions of heat and moisture, epidemic disease finds a congenial breeding-place. Many tenement-houses and even private dwellings appear to have been constructed with almost criminal disregard to the health of the occupants. We think that the attention of the public cannot be too strongly or too frequently directed to the fearful penalty which must follow disobedience of the first principles of sanitary science.

JEQUIRITY IN SKIN-DISEASES.—Dr. J. Shoemaker (*Lancet*, August, 1884, p. 185) contributes an able article on "Jequirity (Linnæ): and its Use in Disease of the Skin." Cases are cited, showing the results met with in the treatment of ulcers, lupus, etc. The author sums up by pronouncing jequirity a most powerful agent, applicable to most cases of unhealthy ulcerating and granulating conditions. It exercises a destructive tendency, followed by a constructive change, which leads to a rapid development of healthy tissue. The remedy should be applied with caution, as it may give rise to alarming symptoms, such as erysipelatous inflammation, and in weak and irritable patients to great constitutional disturbance. These symptoms, however, will speedily subside with proper attention and on the drying of the crusts. To prepare a proper solution of the beans, the following directions are given. "Two hundred grains are decorticated by being slightly bruised and cracked in a mortar, the red hulls are carefully picked from the cotyledons, and, in a bottle, covered with distilled water. They are thus macerated for twenty-four hours, when they are again transferred to a mortar and reduced to a smooth paste, and then sufficient water is added to make the whole weigh eight hundred grains." The emulsion is then applied to the ulcers, etc., by a camel's-hair brush. Several strikingly suc-

cessful cases of lupus, scrofulous, indolent ulcers, venereal and epithelial ulcers, are recorded, illustrating the great value of the drug in such cases.—*London Medical Record*.

FEVER OF GROWTH.—In a paper published in the *Gaz. Hebdom. de Méd. et de Chir.*, No. 34, 1884, the author reports several cases of this affection, which has been already carefully described by Bouilly, Guillet, and others. It is most frequent between the ages of seven and fifteen, and seems to be generally caused by some unusual fatigue or exertion. The chief symptoms are fever, pain about one or more joints, and rapid increase in length of the body. The fever varies in degree, duration, and character, but the temperature generally reaches 40° C. (104° F.). The pain, which is much increased by pressure, is localized in some typical situations, such as the epiphyses of the long bones, and more especially of the femur. There may be some effusion into the neighboring joints, but never to any considerable extent. The third symptom is sometimes very marked, and Auboyer has reported a case in which the patient had grown fifteen centimetres in two months. According to M. Reclus, the disease is a mild form of osteomyelitis. The diagnosis requires to be made chiefly from acute rheumatism and from destructive inflammation of the joints.—*London Medical Record*.

THE USE OF RESORCIN IN SKIN-DISEASES.—Andeer (*Monatshefte für Prakt. Dermatologie*, No. 5, 1884) has found resorcin to be a valuable remedy in eczema. He relates the history of a case in which a boy, 18 months old, suffered from a painful eczema of the head and face, which prevented him from either laughing or crying, and rendered restraint necessary to prevent his tearing himself. The treatment consisted in rubbing in vigorously, once a week, an ointment of resorcin with vaseline, beginning with five per cent. and going up gradually to eighty per cent. in strength. The disease yielded entirely to this treatment.—*London Medical Record*.

CHOLERA.—The sudden and extensive outbreak last week in the city of Paris, after the epidemic in the south of France had been officially decided to have reached its end, gives an additional argument to those who have all along maintained the doctrine of the essential identity of the present with former epidemics of Asiatic cholera, and is a warning to us to put our houses in order for the visitation, which will in all probability be upon us early next year. We hope that proper hospital arrangements will be made to accommodate a large number of sufferers who may suddenly claim medical care, as they did in former epidemics.

MISCELLANY.

PENNSYLVANIA HOSPITAL.—On last Monday evening a notable ceremony was held at the Pennsylvania Hospital, the occasion being the restoration, after an absence of fifty years in another department of the institution, of the celebrated picture of Christ Healing the Sick in the Temple, which had been originally painted for and presented to the hospital by Benjamin West. This canvas is now most appropriately hung in the clinical amphitheatre, facing the audience, over the doorway through which the patients are brought. Dr. Thomas G. Morton, of the hospital staff, upon the unveiling of the picture, gave a brief but interesting account of its history, and was followed by Mr. John B. Garrett, representing the Board of Managers, in an able address, in which the growth of the hospital and its present usefulness were presented. A large audience of invited guests of both ladies and gentlemen was present.

THE MEDICAL JURISPRUDENCE SOCIETY OF PHILADELPHIA, at its stated meeting held November 11, considered some questions of present interest connected with a recent criminal case before the courts, in which a prisoner on trial for the murder of his keeper had set up the plea of insanity. Two papers were read,—one by Dr. Charles K. Mills on the case of Joseph Taylor, the other by Dr. H. C. Wood on "The Absurdities of the Law as Illustrated in the Taylor Case." An interesting discussion was held, in which the President, George W. Biddle, Esq., District Attorney Graham, Drs. Robinson, Packard, and Cohen, and Messrs. Carson and Shapley participated.

POISONOUS CHEESE.—Cases of cheese-poisoning are attributable, according to Dr. Vaughan (*Proc. Am. Pub. Health Assoc.*), to a chemical substance soluble in alcohol, the production of which is attributable to the rapid growth of the *Bacillus subtilis*. As it is present in new cheese, the difference between the poisonous and non-poisonous is one of degree rather than of kind.

HYDROCHLORATE OF COCAINE, the new local anæsthetic (in four-per-cent. solution) has been received and is for sale by Eisner & Mendelson, importers, No. 320 Race Street, Philadelphia.

DR. HENRY LEFFMANN has been appointed Physician to the Port of Philadelphia by Governor Pattison.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM OCTOBER 26, 1884, TO NOVEMBER 8, 1884.

ALDEN, C. H., MAJOR AND SURGEON.—In addition to his duties at Fort Snelling, Minnesota, to perform the duty of attending-surgeon at Department Headquarters. S. O. 127, Headquarters Department of Dakota, October 23, 1884.

SPENCER, W. C., MAJOR AND SURGEON.—Ordered to Fort Trumbull, Connecticut, for duty as post surgeon, relieving Assistant-Surgeon Wm. J. Wilson, U.S.A., who will report at Department Headquarters and await further orders. S. O. 227, Department of the East, November 5, 1884.

TOWN, F. L., MAJOR AND SURGEON.—Assigned to temporary duty as post surgeon, Fort Clark, Texas. S. O. 145, Department of Texas, October 27, 1884.

BENTLEY, EDWIN, MAJOR AND SURGEON.—To be relieved from duty at Fort Clark, Texas. S. O. 145, Department of Texas, October 27, 1884.

WILSON, W. J., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Trumbull, Connecticut. S. O. 220, Department of the East, October 27, 1884.

CORBUSIER, W. H., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Bowie, Arizona Territory. S. O. 99, Department of Arizona, October 22, 1884.

CORBUSIER, W. H., CAPTAIN AND ASSISTANT-SURGEON.—Ordered to Fort Grant, Arizona Territory, for duty as post surgeon. S. O. 102, Department of Arizona, October 30, 1884.

LA GARDE, L. A., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Ellis, Montana Territory, relieving First-Lieutenant G. E. Bushnell, Assistant-Surgeon U.S.A., who, upon being relieved, will report for duty at Fort Snelling, Minnesota. S. O. 126, Department of Dakota, October 22, 1884.

HOPKINS, WM. E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Ordered to Fort Lowell, Arizona Territory, for duty as post surgeon. S. O. 102, Department of Arizona, October 30, 1884.

EGAN, PETER R., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Lowell, Arizona Territory, and ordered to Fort Bowie, Arizona Territory, for duty as post surgeon. S. O. 102, Department of Arizona, October 30, 1884.

EVERTS, EDWARD, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 107, Headquarters Division of the Pacific, October 21, 1884.

MCCAW, WALTER D., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Ordered from Fort Craig, New Mexico, to Fort Wingate, New Mexico, for duty. S. O. 92, Headquarters District of New Mexico, October 21, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM OCTOBER 26, 1884, TO NOVEMBER 8, 1884.

Surgeon GROVE S. BEARDSLEY, to Washington, D.C., for examination preliminary to promotion, and as to qualifications for sea duty, October 31, 1884.

P. A. Surgeon THOMAS C. CRAIG, to the "Alliance" for temporary duty, October 31, 1884.

P. A. Surgeon JAMES E. GARDNER, to the Naval Hospital, Norfolk, Va., October 28, 1884.

P. A. Surgeon JOHN H. HALL, from the Naval Hospital, New York, to the Navy Yard, Mare Island, California, October 29, 1884.

Medical Director WILLIAM T. HORD, to continue duty as member of the Retiring Board until January 1, 1885. October 27, 1884.

P. A. Surgeon P. A. LOVERING, to the Naval Dispensary, Washington, D.C., for temporary duty, October 27, 1884.

Medical Director THOMAS J. TURNER, to continue duty as member of the Retiring Board until January 1, 1885. October 27, 1884.

P. A. Surgeon JOHN M. STEELE, to the Naval Hospital, New York, October 29, 1884.

P. A. Surgeon THOMAS C. CRAIG, to the "Alliance" for temporary duty, November 1, 1884.

P. A. Surgeon ROBERT SWAN, detached from the Naval Hospital, Norfolk, Va., and placed on sick-leave, November 3, 1884.

WIEBER, F. W. F., appointed Assistant-Surgeon, November 3, 1884.